

[A Simmons-Boardman Publication]

BETTER HOMES



BETTER BUSINESS

BETTER HOMES MEAN BETTER BUSINESS. THE AMERICAN BUILDER ENDORSES A VIGOROUS HOME BUILDING AND REPAIR DRIVE IN EVERY COMMUNITY TO CREATE THE DESIRE FOR BETTER HOMES. BUILDERS, DEALERS, ARCHITECTS, REAL ESTATE MEN AND THE LOCAL DEPARTMENT STORES AND NEWSPAPERS SHOULD CO-OPERATE TO POPULARIZE BETTER HOMES.

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Keep Home Building PRIVATE Industry

THE recent "Ickes-Moffett controversy" related specifically to the means by which home-building should be revived. But the real issue that caused the controversy was broader and deeper.

That issue was—and is—will recovery in the homebuilding industry in particular, and in industry and business in general, be stimulated, retarded or prevented by huge government expenditures or subsidies for construction, whether of "public works" or homes?

Secretary Ickes advocated big government expenditures or subsidies for housing. Housing Administrator Moffett opposed them upon the ground that they *would retard recovery by causing a curtailment of private expenditure and investment.*

The American Builder agrees with Mr. Moffett 100 per cent.

This paper was the first to advocate the National Housing Act and conducted most of the effective propaganda for it. Why? First, because we believed that most of the *direct government expenditures* upon public works would prove useless as means of reviving business. Second, because we believed that the employment of government *credit* to stimulate *private expenditure* on and *private investment* in homes would be the most effective single means of promoting recovery.

The experience of the last eighteen months shows that these views were right. Public works expenditures have increased until in the latter half of 1934 they were *much larger* than in the latter part of 1933. But *the total volume of business and employment in the country was smaller.* Why? First, *because the government took capital for public works that might otherwise have been invested in private industry and construction.* Second, because its huge expenditures so unbalanced its budget as to impair business confidence. Third, because its general policies,—including public works—of increasing wages, costs and prices reduced the incentive of all classes, business men, farmers, and wage-earners, to spend and invest their own available funds.

The National Housing Act is a sound measure. Given untrammelled opportunity under it, contractors, manufacturers and material dealers can and will "sell" the public the desirability of large expenditures for home modernization and building. They are already doing so.

Let the government enter the field with large expenditures and subsidies, as favored by Secretary Ickes, and the large increase of private expenditure and investment already begun will be curtailed or stopped.

The home-building industry should tell Secretary Ickes to stick to his own special job of wasting billions of the taxpayers' money by pouring them down the rat-hole of unneeded public works. *Home modernization and building is a private industry which can be adequately revived only by inducing the expenditure and investment of billions of dollars of private funds.*

Samuel O. Drunn,
CHAIRMAN,

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AMERICAN BUILDER AND BUILDING AGE

Job Responsibility Under FHA Long-Term Mortgages

HOUSING Administrator James A. Moffett has frequently referred to contractors and lumber dealers as the "key men" in the FHA program for reviving the building industry. That he means what he says is clearly indicated in the official application forms for insured mortgage loans which are now available in the offices of approved loaning institutions. It is clearly stated therein that every application for a loan must be accompanied by a definite contract proposal. Not only that, but the applicant is required to attach complete plans and specifications, which are made a part of the application.

Also, under Exhibit C, item C, of the official FHA mortgage application form, referring to "Estimated Cost of Improvements," this statement is made: "This shall be the actual proposal or proposals of the contractor or contractors who are to erect, install and complete the contemplated improvements."

All Planning in Advance

This places upon the contractor the necessity for complete advance detailing and specifying of materials and equipment. It means that not only will the contractor definitely specify all of the construction materials but, in order to include the mechanical equipment and fixtures under FHA long-term, low-cost financing, he should specify all kitchen and bathroom equipment, also the heating plant, lighting fixtures, and all other built-in and attached equipment for the home. Thus, under FHA, new responsibility and added control of the specifying, buying and installing of materials and equipment are established.

The reasonableness of these FHA provisions for promoting good value in the small home field is apparent to all who are familiar with the problems involved. The loaning authority looks to some one responsible head on each home building job, and that head is usually found to be the general building contractor. The sub-contract trades are of course "in the picture" but now, more than formerly, will come under the general contract rather than under contracts let separately. Every item of the new home including structure, finish and equipment will tend to come under the original general contract so as to get under the long-term 5 per cent mortgage. The new tendency will be for all designing, planning, specifying,

buying and installing to come under one centralized responsibility on each job; and this will make for satisfaction both for the loaning institution and for the occupant-owner.

Quality Cheapest with "20 Years to Pay"

These FHA mortgage provisions, furthermore, encourage the purchase of long-life quality materials and mechanical equipment. Payment is spread over a long period—up to 20 years—and the interest rate is only 5 per cent. Under such terms the important consideration is not the first cost but the low upkeep and renewal charges for 20 years; and when so considered the higher priced quality items usually figure out cheapest in the end.

Mental Building

It is a well known fact that building projects are not born full-grown over night; they require time to develop and mature; much thought, study and investigation go into them. Home planning, in particular, is a long process because both technical and personal factors have to be satisfied. It is estimated that from two to six months are usually required for the definite and final planning of a dwelling after the decision to build is finally made.

The new home is *built mentally* before it takes physical form on the building site.

The definite planning of the homes and other buildings to be erected in the Spring of 1935 are already under way. The building contractors who will profit most from the revival of home building under the stimulus of FHA loans and promotion are already in consultation with clients and prospects, selecting designs and figuring materials and equipment to come within the budget.

Much will have to be done to get these projects "buttoned up" in all details before the open building season is on in full swing. Much progress in design, use of materials and in standards of home equipment has been made during these last four or five dormant years. So, a word of caution to all: Don't build today a house already out of date; get the latest information; look ahead; accept your responsibilities; and plan, specify and build better homes.

HOUSING LEADERS HOLD TO SOUND POLICIES

"THE average citizen is not bothering about deflation, inflation, the gold content of the dollar or any such technical problems; but, with confidence in his Government and the future of his country, he is going ahead spending whatever it takes to modernize his property and keep it in good repair. He is making haste to realize on the advantages offered by the Modernization Program. He knows that the longer he delays these repairs, the more they are going to cost him."—*Federal Housing Administrator James A. Moffett addressing the Ft. Duquesne Club, Pittsburgh, on Dec. 5.*

Nation Organized for Sound Appraisals

"We have built up an organization to make our risk-rating investigations and appraisals. Each of the 61 Underwriting Offices of FHA is manned with a Chief Underwriter. Under him are the Chief Architectural Supervisor, Chief Valuator, and Chief Mortgage Examiner, together with a number of assistants, including architectural inspectors, construction cost estimators, staff valuers, mortgage examiners, and others. In addition, arrangements have been and are being made to approve certain qualified outside consultants to act for the government as Fee Architects and Fee Valuers. We are selecting these men with the utmost care and are requiring them to be thoroughly familiar with the underwriting procedure of the Federal Housing Administration.

"Our system has some interesting features. For example, the inspections of properties are not made by a single appraiser or by several men having the same technique at their disposal. Our system sends two men to each property—one an architect, the other a valuator. They make independent reports on different aspects of the property. This two-man survey is essential to secure a sufficient examination of the security behind the mortgages we insure."—*Deputy Administrator J. Howard Ardrey, addressing New York Chapter, American Institute of Real Estate Appraisers, on Dec. 8.*

Time for Private Capital to Come Forward

"The Home Owners' Loan Corporation is investing three billion dollars in home mortgages, and the Farm Credit Administration two billion dollars in farm mortgages—and I venture without loss to the government. The life insurance companies are also in these two fields, and in addition are making some business property loans, but nothing like enough to unfreeze the mortgage situation.

"The accumulation and ownership of property is the capitalistic system, and if we are to expect people to own their homes and to invest in property, there must be some market or loan value for those who need to realize on their investments.

"In an effort to assist the President in every possible manner within the limits of our means and authority, the RFC has offered to buy preferred stock and capital notes in trust companies that would specialize in real estate mortgages."—*Jesse H. Jones, Chairman of the Recon-*

struction Finance Corp., addressing the Bond Club, New York City, on Dec. 12.

Opportunity for Mortgage Lenders

"The Home Owners' Loan Corporation, was devised as an agency to meet an extraordinary emergency. It should be kept to that conception of its functions. The Government should not be expected to go on indefinitely financing the home mortgage needs of our people when the privately managed lending institutions of the country with their long experience and highly developed efficiency are abundantly able to meet the demand and to do so at rates and for terms comparable with those which the Corporation has extended."—*John H. Fahey, Chairman, Federal Home Loan Bank Board, addressing Association Life Insurance Presidents, New York on Dec. 13.*

IT WILL NOT BE "MODERN" UNLESS AIR CONDITIONED

THE homes, stores and offices being planned this winter for construction a little later in the year should, of course, embody the latest ideas; otherwise their owners will find them outmoded and already devalued by obsolescence before they are completed. Air conditioning is probably the most outstanding *new* fact that builders must reckon with. The buying public is sold on air conditioning; they may not know exactly what it means; but they *want* it.

Bennett Chapple, vice president of the American Rolling Mill Co., well known to radio listeners as the "Iron Master," summarized the present status of air conditioning in his Christmas broadcast of Dec. 23. He said,

"I wonder how many of you put on your list of Christmas suggestions for Santa Claus an air conditioned house or bedroom. For several years we have been hearing rumors and prophecies about the future of air conditioning. Now it is here; it has arrived, with all the vigor and vitality of a young giant just come of age. Just think of it! Air conditioning practice has actually made more progress in 1934 than in all the other years of its history put together.

"Several leading manufacturers have brought out complete, self-contained units for conditioning the air of entire buildings or individual rooms. These are not seasonal devices, either; they are designed to give complete air-comfort the year 'round. And look what the railroads are doing . . . why, even now, it is almost impossible to take a long train journey without getting into a Pullman that is flooded with clean, tempered, dust-free air. Our first-class restaurants, hotels, department stores and shops are putting in air conditioning systems and increasing their business because of it.

"Air conditioning is also serving industry. It safeguards materials in processing and increases measurably the efficiency of workers. Hospitals are taking it up, too, for air conditioning is certainly a boon to the sick-room."

Home building contractors have a heavy responsibility for planning and specifying the heating plants in the buildings they erect. Study into air conditioning and assure your clients really up to date installations.



OPPORTUNITY

NEVER BEFORE has the residential building industry faced so great an opportunity as it does today; the possibilities stretch out before it to embrace many years ahead, with Dame Fortune beckoning and all the circumstances favorable.

First in the picture come little jobs of repair and fixing, none impressive in their simple needs, but leading to much bigger things. The old back porch wants a new backbone and the front of the house cries for a mechanical beauty treatment.

Later we see the prospect of new houses—hundreds of thousands of them—to satisfy the home hunger that has been partly hidden during the depression years. Once again we turn as a nation to the intrinsic value of the home, holding it up with acclaim, returning to the homespun ideals of the pioneers.

And in this vista of the future we see the residential builder with no lack of opportunity.

With these new opportunities there comes a corresponding set of responsibilities. As a man must do good work to deserve an honest profit, so residential builders now need to be alert to assume and satisfy the added obligations which are both tangible and nebulous.

It is not a question of minor things alone; there are broader responsibilities which no mechanic or builder or architect or financial man may shirk. Those who create

structures, whether working with simple tools or carrying out the policies of some great lending institution, face tests of personal integrity more rigid than ever in the past.

For we are entering an era of better homes, a period of better building, a time of clearer perceptions of structural worth. Beside the flimsy shack of boom-time operators the house of future years will be a masterpiece; we are again upon the trail which leads through the sound ideals of the oldtime builders and on into a future of even greater worth. Again the fine craftsman will have honor, the honest material dealer or manufacturer will be recognized by all, and builder-architect of merit and sincerity will be always welcomed. Shoddy ideals are definitely on the wane; true worth and high quality in home building will bear no handicap in the race.

The reason for this belief is not far to seek. For those who will see, the trend points the way . . . and America is tired of cheap, makeshift, box-like houses. The great troubles which came to so many during depression years served to make them see again the values in wholesome, steady home interests; this enlistment of interest on the part of the general public dramatizes a trend, is responsible for part of the great popularity already accorded the National Housing Act.

People need to have homes they can cherish for their entire lives, bulwarks against the shifting fortunes of life. Therefore the trend today toward quality, away from housing expedients. And the recognition of the need for a longer time to repay first mortgage borrowings is not the least of the encouraging developments. With every mortgage being amortized each home owner can know he or she makes definite progress. Lower interest rates have long been needed—the new National Housing Act recognizes this need, too. They are heartened, all those who own homes, and those who dream that one day they, too, shall own the roofs over their heads.

This is sound. This is good. This is practical.

And for those who have to do with the building of homes there is a vital message; it is this. . . .

You are needed again after years of thinking you had been forgotten entirely. . . . You will be greeted with respect, never fear, for with you lies the responsibility for the reputation of a giant among industries, not only now and tomorrow but for generations to come; upon your acts will be built a worth whole history or a worthless and shameful tale, dependent upon your reactions to these new and greater responsibilities.

The honored reputations of good builders stretch back beyond the dawn of remembered time; the true ideals of the Building Industry find answering cheers in the hearts of every honest, thinking human being.

It is the time. In any little way we can—shall we not do our full part . . . and more?

—AMERICAN BUILDER.

FHA HOUSE STANDARDS

Require Careful Planning, Sound Construction,
Encourage Building of Quality Homes for Sale

THE opening of the new year finds Administrator James A. Moffett, his assisting officials, and the large staff of workers of the Federal Housing Administration rapidly laying the ground work for a large volume of new home construction under the insured mortgage facilities of Title II of the Housing Act.

Early in December it was announced that several hundred of the leading financial institutions of the country had signed up to make loans under Title II. A large number of the most influential banks and trust companies have been approved as mortgagees. The Administration is picking its institutions carefully making sure that they are financially sound and well able to service the mortgages which they will make.

3 New Booklets

During December FHA published three important booklets on Title II of the Housing Act which are available to the building industry through regional FHA officers or by writing to the Federal Housing Administration, New Post Office Building, Washington, D.C. These are as follows:

CIRCULAR No. 1—Mutual Mortgage Insurance: Regulations Under Title II of the National Housing Act.

CIRCULAR No. 2—Information Regarding Property Standards for the Insurance of Mortgages Under Title II of the National Housing Act.

CIRCULAR No. 3—Information Concerning Insurance of Mortgages on Low Cost Housing Projects Under Section 207 of the National Housing Act.

These circulars lay the general basis of operation for builders and the building industry in connection with insured mortgages. The standards set up are for the most part sound and sensible and will tend to stabilize conditions and improve practice in the residential construction industry.

Forms for applications for FHA insured mortgage loans which were published in the December AMERICAN BUILDER are available at regional offices. Builders are urged to secure copies so they may familiarize themselves with the procedure of obtaining housing loans.

One of the first important details of operation under Title II of FHA is that complete plans and specifications and bid proposals are required in advance of the obtaining of a loan commitment. This means that contractors are placed in complete control of all the elements of the job and are made responsible for more complete advance planning and detailing of the job.

"Operative Builders"

The Federal Housing Administration has reformed and renamed the man who used to be referred to as the *speculative builder*. In bulletins of the Administration he is now referred to as the *operative builder*. Operative

builders, the FHA states, are eligible for insured mortgage loans and are relied upon to do a large volume of residential work in 1935.

"The American home owner has come to depend upon the operative builder to satisfy his needs," the FHA explains. "Comparatively few Americans go out and buy a plot of ground, employ an architect to draw up plans and then let the contract themselves. It has been shown through many years that they like to buy their homes after they are completed."

The operative builder is defined by FHA as an individual partnership or corporation which engages in the production of dwellings with the intention of selling or renting. As readers of the AMERICAN BUILDER know, by far the great majority of homes that are speculatively built are erected by small and medium size operators who put up two or three homes at a time. FHA tends to make the mistake of many in implying in some of its bulletins that speculative, or operative builders consist of big city real estate developers only. While these men are important, by far the greater volume of speculative building always has been and probably will continue to be done by thousands of small operators in the smaller cities, towns and outlying sections.

The number of insured mortgage loans which an operative builder may obtain is limited only by the general conditions laid down by FHA and the need for homes in the community as determined by FHA surveys.

Mortgages may be placed upon detached, semi-detached or row type one- to four-family dwellings, subject to the following limitations: 1. Each dwelling must be located on a separate plot of land. 2. Each dwelling must be capable of being separately owned. 3. Each dwelling must be financed as a separate unit.

When certain provisions and rules have been lived up to, commitment for the insurance of mortgages covering an operative builder's project may be made in advance, the FHA regulations state.

In its circular No. 2, the FHA sets up broad principles and standards for insured mortgage loans which are worthy of study. In a preliminary statement, FHA says: "Mortgage insurance facilities may be made available only to those properties whose prospects of continued utility are sufficiently good to give assurance of their enduring as sound investments through the life of the mortgage."

FHA intends, the circular states, that "dwellings shall be placed only in neighborhoods which possess to a considerable degree security from those disintegrating influences which are more certain to destroy property values than defects of the buildings themselves.

"The Administration does not propose a standard to build down to, but one to build up from. It distinctly seeks, through the exercise of its power to insure mortgages, better dwellings in more stable surroundings than have too frequently been an accepted standard in our urban communities.

"Neighborhoods in which the factors producing stability are neglected, where protection against the encroachment of incompatible uses is lacking, where extravagant improvements produce unnecessary burdens upon ownership, where badly designed and crowded dwellings cause constant shifting of population, cannot be suitable localities for the application of mortgage insurance," it is stated.

FHA will have a word to say about the designs of homes on which insured mortgages are issued. In circular No. 2 it says: "Designs which are simple and direct will receive preferential consideration. Pleasing effects should be obtained by careful selection and use of materials, by the consideration of mass and scale, particularly with reference to neighboring structures, by the proportioning of openings, and by the use of planting and topographical features as adjuncts to design.

"The elaborate use of motifs and ornaments, the inclusion of unnecessary variety of materials and the straining for picturesque effects will be discouraged. Designs which are fadish or which are incongruous in relation to the neighborhood as a whole, unless expressing a recognized general trend, will tend to render a property ineligible."

Following are extracts from FHA Circular No. 2 dealing with housing standards:

Services and Equipment

Each dwelling shall have a supply of pure water, adequate in volume and pressure for the normal uses of the occupants. This supply shall be from an approved community source, except that a drilled well, if so located on the property as to insure its safety from sources of pollution, may be acceptable.

Each family unit shall have a water supply to the kitchen, over a sink with a waste outlet to an approved public sewerage system, or, where a sewerage system is not available, the waste outlet shall be such as to assure a proper disposal of waste water.

Each family unit shall have at least one water closet with a supply of water adequate in volume and pressure for flushing purposes and drained to an approved public sewerage system, except that, where such sewerage system is not available, an approved septic tank, or cesspool with proper provision for disposing of the effluent, may be acceptable.

Where definite regulations for plumbing and sewerage are not established, the National Bureau of Standards, United States Department of Commerce bulletin entitled "Recommended Minimum Requirements for Plumbing" may be used as a guide, subject to the requirements of the Administration for the locality in question.

Planning and Accommodations

Electric wiring and apparatus are not required except in relation to the general standard of the neighborhood, but if installed, shall be in accordance with the local code or public service requirements. In the absence of such local regulations, the recommendations of the National Board of Fire Underwriters contained in the "National Electrical Code," shall govern except as the specific provisions of this code may be modified by the rulings of the Administrator.

Every building shall have a heating system, which in relation to the character of the dwelling and to the climate in which it is located, shall be adequate. A central heating system with the means of distributing heat to the various rooms is generally recommended.

Each single dwelling and each family unit in a two to

four-family dwelling shall contain not less than three rooms and a bathroom.

Of these rooms, one shall have a floor area of at least one hundred and sixty (160) square feet, one shall have a floor area of at least one hundred (100) square feet, and any additional room shall have a floor area of at least seventy (70) square feet, except a kitchen, which, if in a separate room, shall have a floor area of at least fifty (50) square feet. If facilities for the storage or preparation of food are included in a room other than a separate kitchen, the area of such room shall be increased beyond the requirements stated above by an area equal to that occupied by such facilities. In addition to the above room area requirements, space shall be provided for a bathroom and for closets or wardrobes. Bathroom space shall be adequate and properly shaped to accommodate a water closet, lavatory, and either a tub or shower. The bathroom need not be equipped, however, except as required under "Services and Equipment." There shall be at least five square feet of closet or wardrobe space for each bedroom.

Each room shall have a clear height of at least seven feet four inches over the full required area for that room.

In row-house developments, the interior houses in the row shall be so planned that they are not more than two rooms deep from front to rear.

Access to the only bathroom or water closet compartment of a family unit shall not be solely through a bedroom.

Dwellings intended for occupancy of more than one family shall have separate means of access for each family, which shall not pass through the quarters of any other family.

Each room shall have a window or windows, to be referred to as "required windows," having not less than one square foot of glass area to each ten square feet of floor area. Such windows shall be so constructed as to permit not less than forty-five per cent (45%) of the required glass area to be opened for ventilation.

Each required window shall be so located that a line in a vertical plane perpendicular to the plane of the window, drawn from the top of the highest existing or allowable opposing obstruction to the head of the window, shall form, with the plane of the window, an angle of not less than thirty-five degrees (35°) provided that no such obstruction be within a minimum of ten feet along a line perpendicular to the plane of a required window. These regulations do not apply to windows which are in addition to required windows as previously described, nor do they apply to windows in pantries, closets, halls or bathrooms. In no case, however, shall a building which is not built as a lot-line building be closer to the property line at the side than three feet.

Any water closet shall be in a bathroom or compartment having a window, with a ventilating and glass area of not less than three square feet, located in an outside wall of the building, which window shall be at least five feet from any opposite wall or property line.

Minimum Construction Standards

Construction types customary to the locality in which they are to be used, will be acceptable generally. Only materials and methods of proven durability and suitability for their intended purpose, shall be considered for use in structures eligible for insured mortgages. While there will be no discrimination against new materials and methods because they are new, it will be necessary that satisfactory evidence of their effect upon durability and marketability be submitted to the Federal Housing

(Continued to page 61)

1934 Building and the Outlook for 1935 — What AMERICAN BUILDER sees ahead for Building Activity

BUILDING has at last turned the corner and is again on the upward trend—for the first time in six years! All divisions of the business evidenced improvement in 1934 over the preceding year and this indication of returning health in the industry is particularly encouraging after six years of disappointing annual totals.

Market Behavior During 1934

Although Government expenditures were responsible for well over a third of the total building volume in 1934, Residential building maintained a level slightly better than the year before; Alterations and Repairs climbed; and Public Works, Utilities, Etc. showed considerable improvement. Generally, the market was characterized by sluggishness during the first part of the year, which was followed by a slight but steadily increasing improvement after the National Housing Act started to function.

Erratic movements in some sections during the year accounted for considerable volume, such as the apparent revival of building in the State of Florida; these individual spurts could be compared to the advances made in the same manner slightly before the start of the high volume building years of 1925-1928. Some building industry economists seem to think this indicates the start of another "boom" period; it is doubtful if "jerry building" can run wild again, in view of the sane control indicated as on the way through the restrictions and standards covering quality building under the Federal Housing Administration.

A majority of the building industry leaders point out that the National Housing Act will operate to regulate and stabilize mortgage procedure in the residential field; they expect this legislation will have similar beneficial effects on other types of building as well.

Based on the 1930 Census figure of 122,775,046 population as a constant, total building averaged slightly more than \$28 per capita in 1934. This compares with a figure of approximately \$100 per capita for all construction in 1929 estimated by Dr. Alanson D. Morehouse, based on his findings while making the Construction Census in 1929. In other words, total building and construction in 1934 totaled about 28 per cent of the volume of 1929 (not a banner year), including Federal expenditures for all kinds of projects.

Residential Building in '34

In the Residential classification, which affects so large a number of independent contractors, builders and supply dealers, the modest increase in volume for the year was particularly significant because it indicated that the pressure of demand for additional housing had at last reached a breaking point. The upturn, which depended very largely upon renewal of confidence on the part of the buying public, became more evident during the latter part of the first quarter and throughout the second quarter of the year; in many well informed circles this is attributed to the rebirth of confidence due to the news that the U. S. Government intended to do something to help the home building industry. The last two quarters of 1934, which showed a recession, nevertheless revealed

gains which were more than seasonal. Now that the 1934 figures are available for comparison, it becomes evident that the low point was passed some time in 1933 (perhaps early in that year) and that the return has been so slow only because the demoralization of the entire home building group had become so great during the preceding depression years.

Lack of greater volume in home building during the last half of the year is also explained by the fact that many prospective owners deferred building temporarily, to await the benefits to come under FHA insured mortgages.

The Residential per capita figure of \$2.64, in the accompanying table, is based on studies of all available figures and reports from every section of the United States; and the total Residential dollar volume of \$324,126,121 is a conservative figure.

Modernization and Repair Work

Marked improvement in the volume of alterations, additions, modernization and repair work in all classifications occurred in 1934. This was partly due to the efforts of the Federal Housing Administration in promoting this kind of work in all parts of the country,

1934

Estimated Total Building Volume, Entire United States

Classification	Rate Per Capita	Amount
Residential ^a	\$ 2.64	\$324,126,121
Non-Residential	5.10	626,152,735
Alterations, Repairs, etc. ^b	3.48	427,257,160
Public Works, Utilities, etc. ^c	6.88	844,692,316
Federally financed ^d	10.00	1,227,750,460
TOTAL	\$28.10	\$3,449,978,792

^a—This figure may be somewhat low, due to the fact that hundreds of small privately financed residential structures are built every year in each State, and it is impossible to obtain statistical proof of their construction.

^b—In this figure, which includes alteration, repair and maintenance for all kinds of structures, both residential and non-residential, no allowance is made for hundreds of thousands of minor jobs costing a few dollars each. Also, adequate statistical coverage of the work created by the FHA cannot be claimed for this figure, because no adequate system of obtaining statistical proof of this type of work exists; Administrator James A. Moffett estimated that \$131-million of work had been created by the FHA during the first 90 days of activity. This figure is highly conservative.

^c—Privately financed.

^d—Includes: PWA projects \$650,000,000; non-Federal but Government financed projects, \$500,000,000; buildings only, regular Government appropriations, \$77,750,460. Detailed figures may be obtained from the Department of Labor, Washington, D.C.

partly due to the absolute need for essential repairs which could no longer be deferred.

The alterations per capita figure of \$3.48 is not presented as an absolute figure; it represents an average to compare with the other per capita figures, to appreciate the importance of this classification in the 1934 business. The total of \$427,257,160 is probably at least 25 per cent lower than the actual volume executed.

Forecast for 1935

The operations of the Reconstruction Finance Corporation in aiding banks which were in difficulties due to unfortunate realty investments cannot be viewed except as the first step toward stabilization of the entire real property market. The lending of some two billion dollars by the Home Owners Loan Corporation has further eased the previously serious conditions in home mortgage finance. Another factor entering the picture has been the quiet but effective operation of the Home Loan Banks in promoting greater liquidity in home mortgages. These and other Governmental developments of the last few years have tended greatly to relieve the adverse conditions which exerted pressure in opposition to any widespread activity in home building. The industry faces 1935, therefore, with a sounder basis for hope, due to extensive relief to distressed properties, than has been the case in years. Billions of dollars of distressed property have been removed from competition, thereby opening the way for needed new construction.

Constructive factors to be reckoned with in 1935 include the estimated effects of the National Housing Act, which makes first mortgage money available on a new and sounder basis than ever before. There is no limit to the amount that may be insured, according to the text

of the Act, as several billions of insurance on new home building mortgages may be written, subject only to the approval of the President. In addition, insured mortgages may be undertaken on one or more billions of dollars worth of existing home properties, thereby providing for additional relief in the home mortgage markets.

Further hope is held out by the known condition of housing in this country; home building and repair both have been held back to excess during the depression and the backlog of work assures a steadily increasing amount of business for the home building industry.

The per capita figures of approximately \$8.00 estimated for home building in 1935, \$7.00 for non-residential structures, \$7.30 for modernization and repairs, \$7.25 for privately financed public works, utilities, etc., and \$10.00 for Federally financed construction, are all justified as conservative by a careful examination of the market at this time. Greater detail of information regarding the estimated 40 per cent increase in all building for 1935, as compared with 1934, can be obtained by reference to the foot-notes following the table of estimated 1935 construction expenditures.

In January, 1934, this publication predicted that 1934 totals would reach a figure of not less than \$3,381,000,000; reference to our report of 1934 construction, given herewith, shows that the total volume was \$3,449,978,792 or about \$70,000,000 higher than we estimated a year ago. This year's estimate of the minimum total to be expected in 1935 has been as carefully prepared and should prove fully as reliable an index as the figures presented a year ago.

Unquestionably, 1935 presents the best prospects of increased building in all classifications of any of the last six or seven years. The market is in better shape than it has been in years, as far as distressed property is concerned; the active men of the industry are anxious to give the public as great values as possible; there is again a real demand for both new work and modernization.

With the much brighter outlook for building during the coming year, responsibility for individual success still remains with the individual; the share which each contractor-builder, dealer, manufacturer, salesman, or other individual identified with this great market will obtain will depend very largely upon the intelligence and vigor of his efforts to get the business. There are many new faces around the building industry table—the faces of men who are not afraid to think along different lines, in tune with modern conditions and developments. Unquestionably, better business in building is here today, starting a long trek upward over the years; it is time for the experienced men of the industry to “. . . gird their loins for battle . . .” and fare forth to the business fray. No better opportunity could be asked by those identified with building, than the opportunity to go out again, after years of enforced idleness, to fight for the biggest share of the new business that can be obtained . . . it's going to be a real market again in 1935!

1935

Minimum Building Volume Estimated for 1935, Entire U. S.*

Classification	**Rate Per Capita	Amount
Residential *	\$ 8.00	\$ 982,200,368
Non-Residential	7.00	859,425,322
Alterations, Repairs, etc. †	7.30	900,000,000
Public Works, Utilities, etc. ‡	7.25	890,119,084
Federally financed §	10.00	1,227,750,460
TOTAL	\$38.55	\$4,859,495,234

*These totals are minimum estimates for 1935.

**Figures in this column are approximations; actual construction will be very unlikely to occur to exact and even per capita dollar rates.

—Despite the fact that insured mortgages under Title II of the National Housing Act will probably not develop important volume until after the second quarter, due to lack of enabling legislation in many States, it is believed the Act itself will encourage private investors and thereby stimulate considerable new home building. The increase in rate per capita shown over 1934, as estimated for 1935, is partly justified by conditions within the industry, such as: lack of housing for increasing population; replacement building for structures destroyed by fire, flood and other natural disasters; a slight increase due to expected betterment in general business conditions; greater availability of first mortgage funds, initiated in part by passage of the National Housing Act. It is our belief that residential building will show an increase of nearly 100 per cent due to favorable market conditions, with an equal increase to be credited directly to the activities under Titles II and III of the National Housing Act.

f—A widespread desire among manufacturers to repair and recondition factories and plants may account for considerable volume in this classification; also, the direct efforts of the FHA in stimulating residential repair and modernization through community campaigns is expected to produce very worthwhile results, although it is doubtful if more than 35 to 50 per cent of this class of work will be covered by insured notes under Title I. To date nearly six dollars is being spent to every single dollar borrowed, and insured, according to FHA records.

g—Privately financed.

h—Covers additional expenditures for PWA or similar projects, non-Federal but Government financed projects, and buildings financed from regular Government appropriations. This may mount higher than we estimate, dependent upon the decisions of the forthcoming Congress.

Planning the "ADD-A-ROOM" House

An Innovation in House Planning that Meets an Urgent Present-Day Need

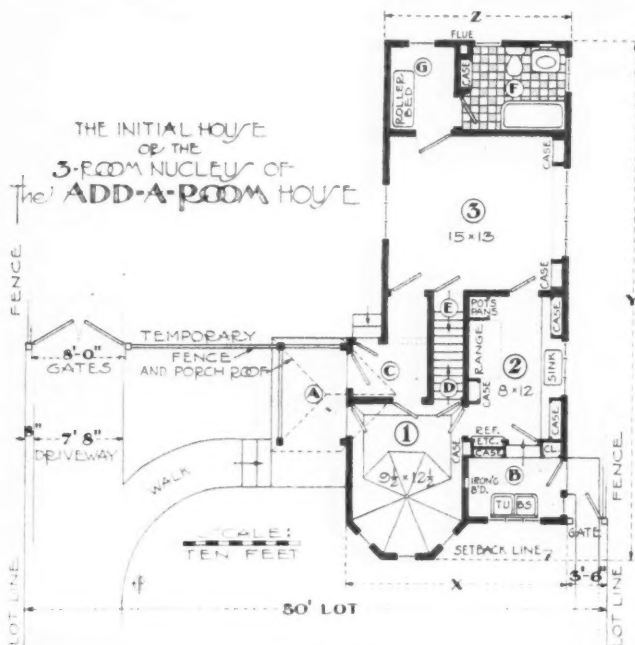
by
ERNEST IRVING FREESE
Los Angeles Architect

IT CAN'T be done?

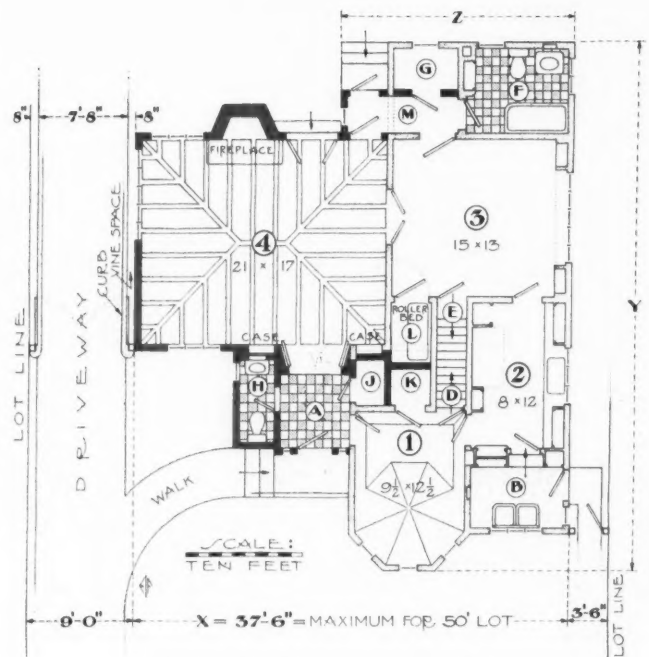
It has been done. The nine drawings accompanying this presentation are ocular proof that the impossible has been accomplished! The ADD-A-ROOM house is the *house of today* for the precise and paradoxical reason that you can build the most of it *tomorrow*. Moreover, this house is a *home* at every stage of its progressive career. It is essentially domestic, yet it is the outcome of rigorous functional planning. It is the expression of ordered growth, not of lifeless finality! It's alive . . . not dead.

The ADD-A-ROOM house grows as your needs increase or as your purse allows and your desires dictate. It is five houses in one: the house of houses, a house of 3 rooms, 4 rooms, 5 rooms, 6 rooms or 7 rooms. Its full development, as here clearly recorded, requires just an ordinary 50-foot lot as a *minimum*, and, to meet the most popular demand, the progressive development takes place *laterally*, that is, the ADD-A-ROOM house is here a one-story one, though expansion *vertically* has also been made possible, as a study of the drawings will reveal. Here, then, is a plan-program that attains the double goal of scientific house planning, namely, *flexibility* and *duality* as regards both the present and future arrangement and uses of the various rooms and accessories thereto.

Want to build? Is your purse lean? Can you "get along" with three rooms? . . . with three rooms that can be made to do duty as five? Then there's your plan, *Drawing 1*: the "nucleus" of the ultimate ADD-A-ROOM house; a wee 3-room that is a perfectly appointed "apartment" . . . and more, a home! This initial house is complete in itself; a charming little domicile

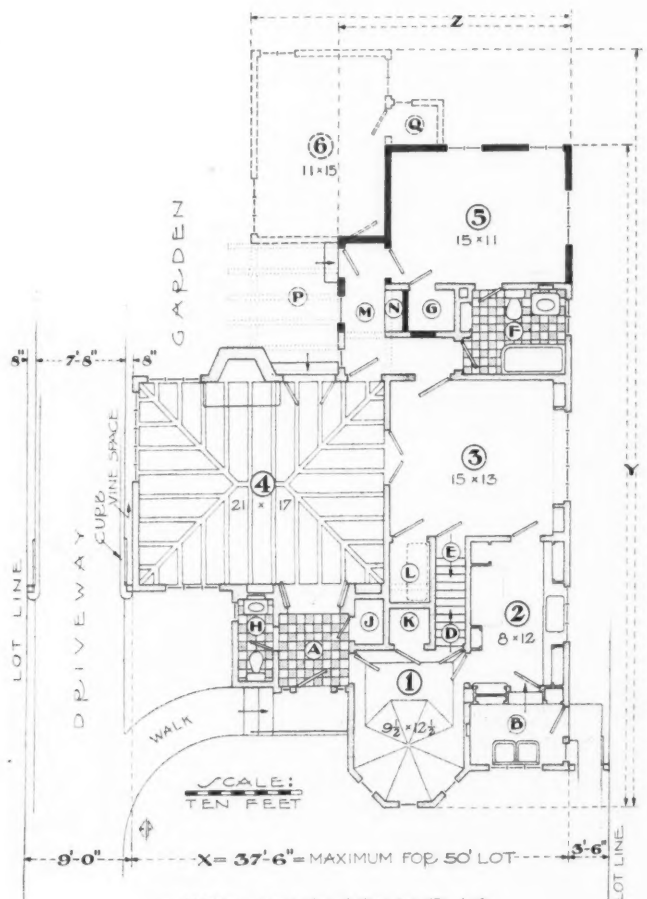


Drawing 1



4-ROOM DEVELOPMENT OF
The ADD-A-ROOM HOUSE

Drawing 2



5-ROOM DEVELOPMENT AND
6-ROOM COMPLETION OF
The ADD-A-ROOM HOUSE

Drawing 3

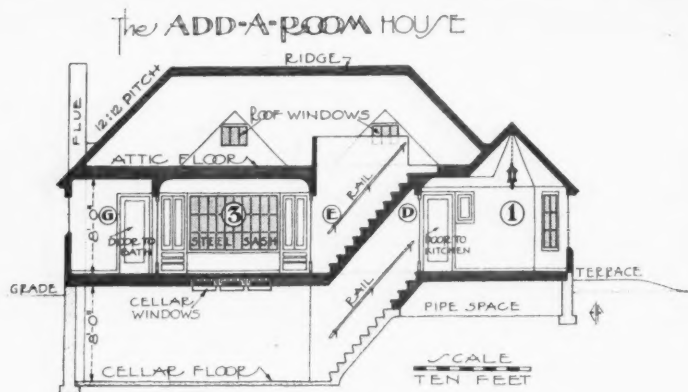


1

101

101





INTERIOR CUT-AWAY VIEW OF THE INITIAL HOUSE
SHOWING STAIRS TO CELLAR AND TO ATTIC

Drawing 7

ners, thus, with the huge fireplace and the garden exposure, making this room exceedingly attractive. Observe that, in this 4-room house, either Room "1" or Room "3" could be used for Dining; and that, without serious inconvenience, every room except the Kitchen could be used for Sleeping. Normally, of course, Room "1" would be the Dining Room, and Room "3" the family Bed Room. Really, though, under *any* conditions, this 4-room house is a wonder! Just imagine yourself *living* in it . . . and you'll agree with me. In this plan, "Y" is 43½ feet; "Z" is 20 feet; floor area is 1200 square feet.

But you now need another sleeping room. All right, add this room as shown by *Drawing 3*. Room "5" is here the added one. So, Closet "G" now shifts to this room, and a hall linen press "N" is taken off "G", still leaving the latter as a good-size closet, namely, here 4 feet by 3½ feet. The original Private Hall "M" is merely extended to reach the added room "5". For this complete 5-room plan, "Y" is 55 feet, "Z" is 20 feet, and the total area of the house is now 1416 square feet. Of course, all of these figures could be reduced by reducing the room sizes, etc., but it would be entirely inadvisable except where restricted space compels. I have shown what should be taken as the minimum room sizes for comfortable living and convenient disposition of furniture.

Now then, if your ultimate desire is for a 6-room house, then merely add the 6th room as shown in *dotted lines* on *Drawing 3*. The outdoor space "P", then becomes a very desirable garden porch or pergola, the connecting link between the Living Room and Garden, as shown. The Closet "Q", for the final room "6", is 4 feet by 3½ feet in area, and is roofed simply by "pulling down" the eaves of the main roof at a lesser slope. In this completed 6-room plan, shown at *Drawing 3*, the over-all depth "Y" becomes 63 feet for the room-sizes

here used; and the rear width "Z", out to out, is now 27½ feet, which, incidentally, places this 6th room exactly in the middle of a 50-foot lot. The area of this completed 6-room house is 1630 square feet, exclusive of the pergola porch "P".

But suppose you want to carry the development still further: suppose your ultimate desire is for a 7-room house. Then, instead of adding Room "6" as has just been shown at *Drawing 3*, add it as shown at *Drawing 4*, thus allowing the 7th completing room to be easily added as is here also shown. Note, also, that the pushing back of Room "6" expands the garden porch "P" by a like amount, and that Room 6, of the 7-room house, has a French door entrance from this patio garden, as shown. The Closets "R" and "S", of this 7-room house at *Drawing 4*, are each 3½ feet by 4 feet in floor area. A private bath room "U", with a separate shower bath compartment "T" can easily be added to this house, as shown, serving the two Bed Rooms "6" and "7". The shower compartment "T" is here made 3½ feet wide and 2½ feet deep, while the size of the added bath room "U" is 11 feet by 5½ feet in the clear. The depth "Y", of this completed 7-room house at *Drawing 4*, is 70½ feet, and the added bath room would extend this 6 feet more. The rear width "Z" is 31½ feet. The total area, exclusive of the garden porch "P", but including the rear bath room, is 2232 square feet. This, then, is the ultimate expansion of the ADD-A-ROOM house. Take especial

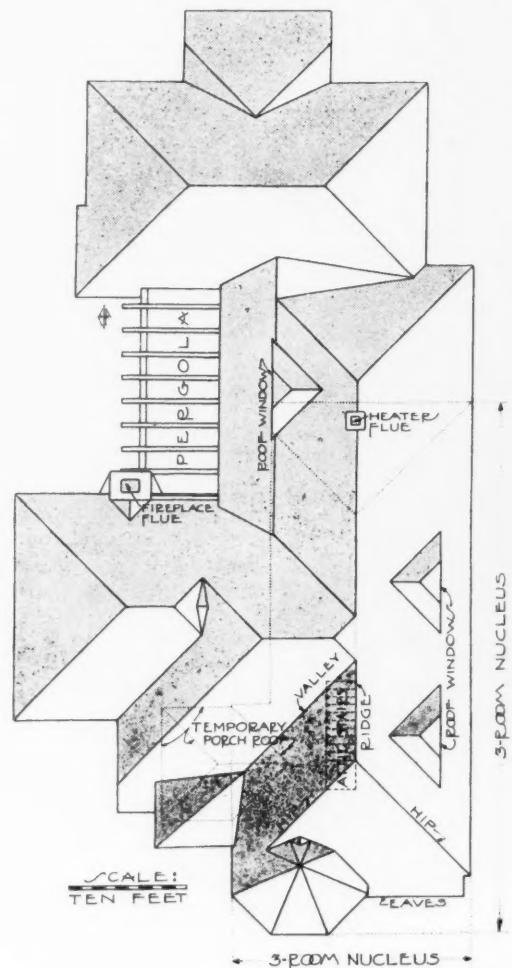
(Continued on page 61)

The ADD-A-ROOM HOUSE



DIRECT FRONT VIEW OF THE INITIAL HOUSE
AND ITS PROJECTED DEVELOPMENT

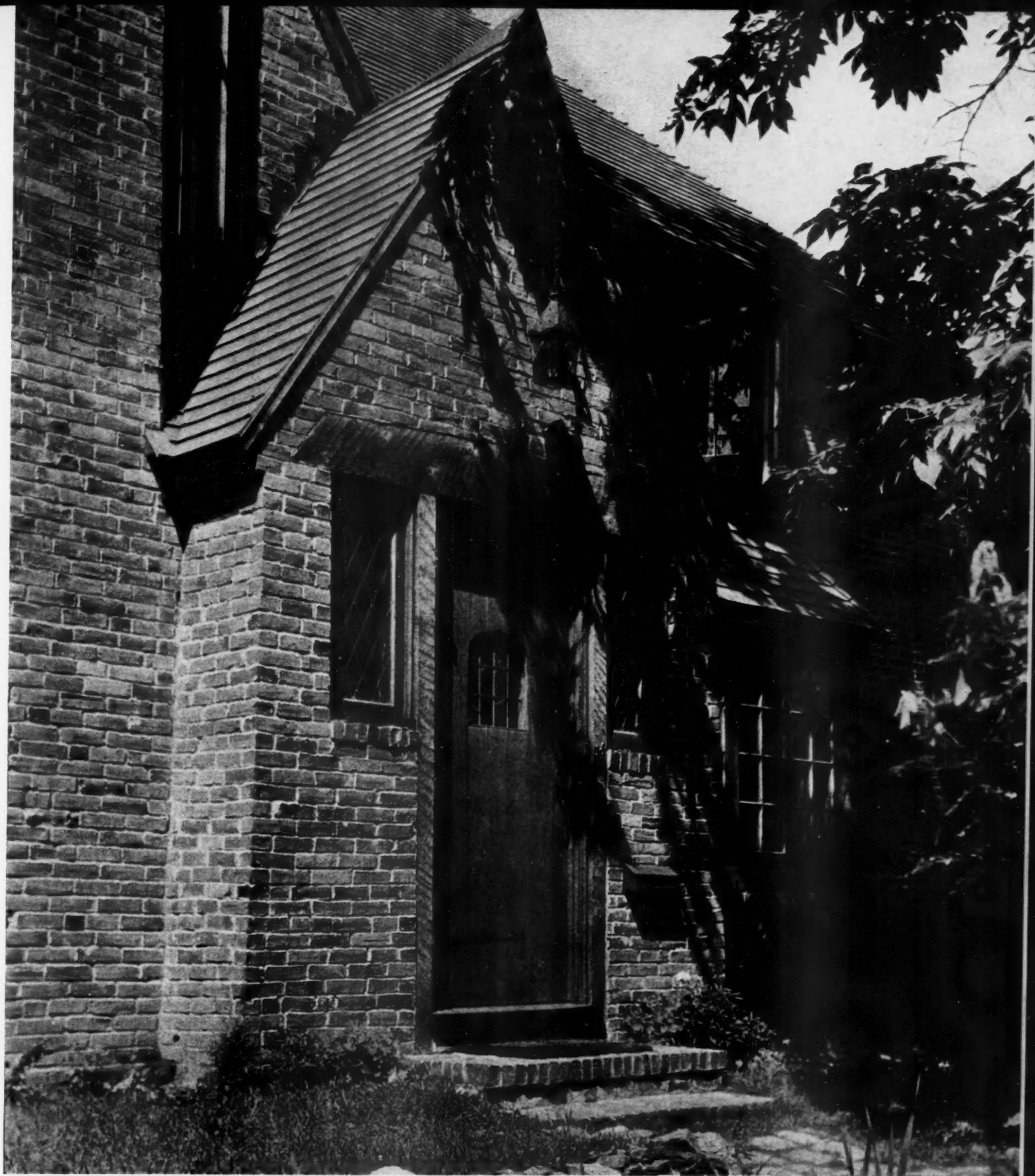
Drawing 8



INITIAL AND ULTIMATE PLANS OF HIP ROOF FOR

The ADD-A-ROOM HOUSE

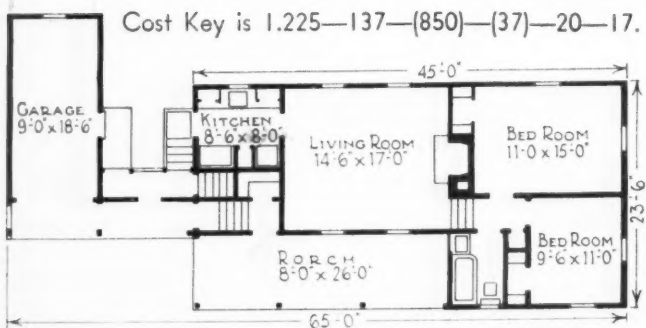
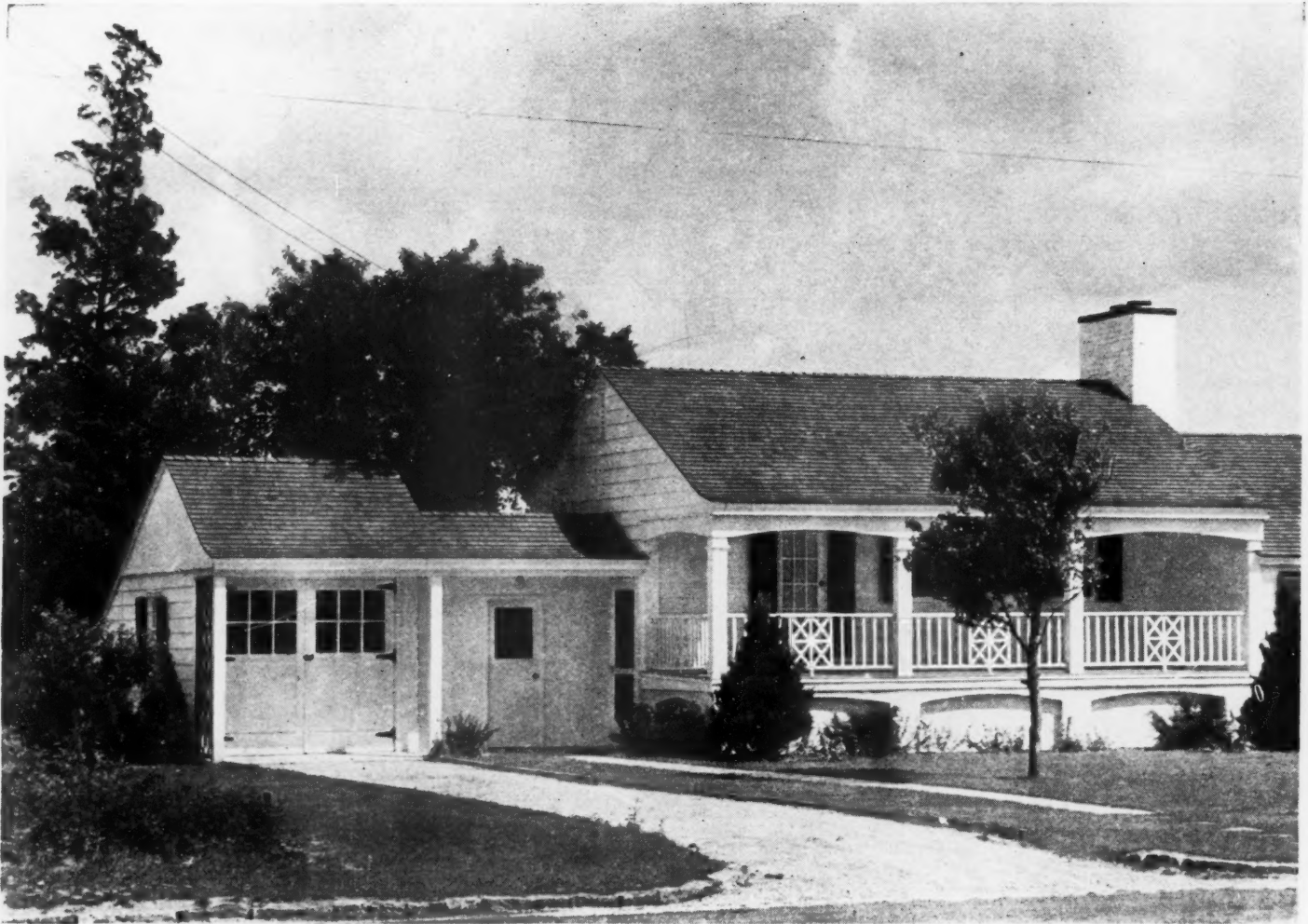
Drawing 9



Royal Barry Wills, architect

Planning Details and Designs for 1935 Homes

MORE COMPLETE CAREFUL PLANNING OF HOMES, and attention to details, will be required for 1935 homes. The trend toward better design makes this imperative. In addition, the new FHA requirements for financing call for complete advance planning and specifying before a loan will be authorized. The charming, carefully designed English type entrance above illustrates the type of quality work needed today. Royal Barry Wills, Boston, architect.



One-Story Colonial

THE UNUSUALLY ATTRACTIVE one-story Colonial illustrated above is located at Harbor Green, L. I., and was designed by Randolph Evans, New York architect, for the Harmon National Real Estate Corporation. Mr. Evans has brought a design technique that is fresh and appealing. The house is long and low, and hugs the ground. It gives an appearance of size and expensiveness far in excess of its actual cost.

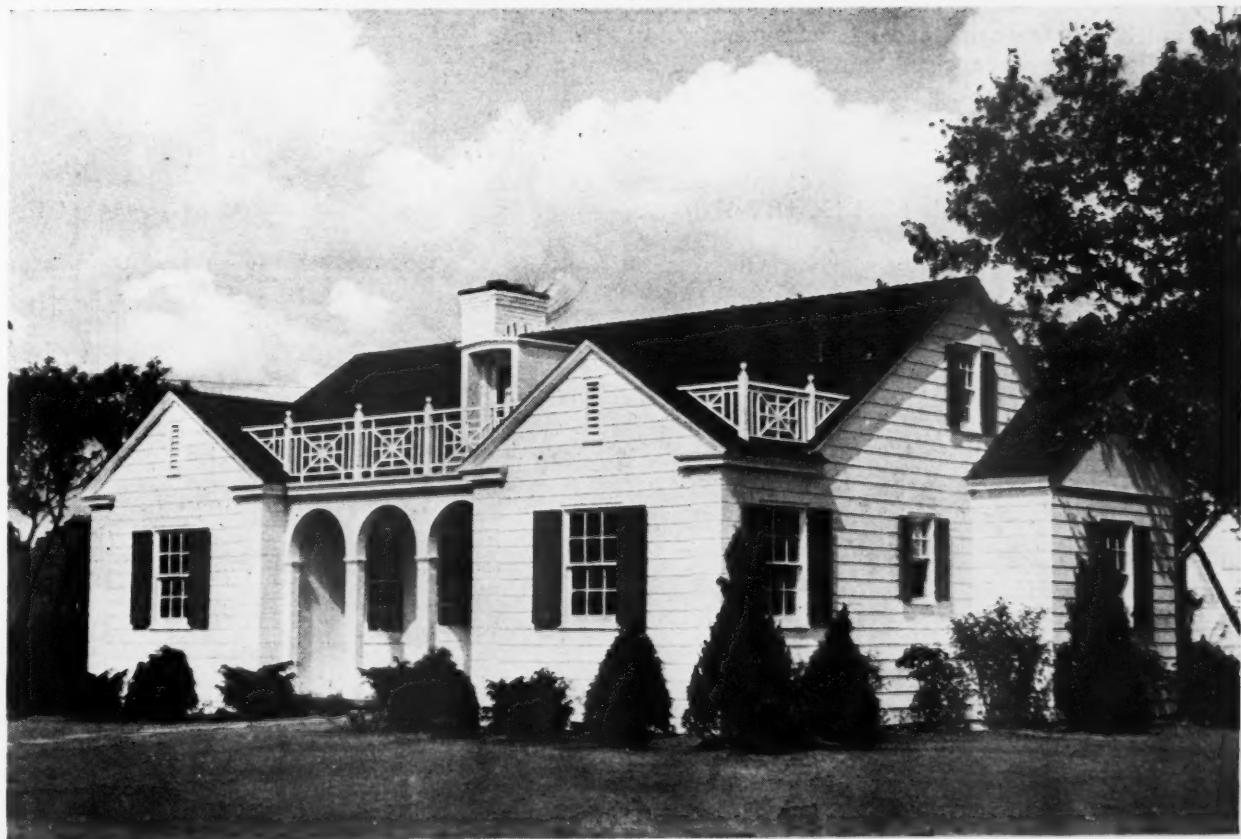
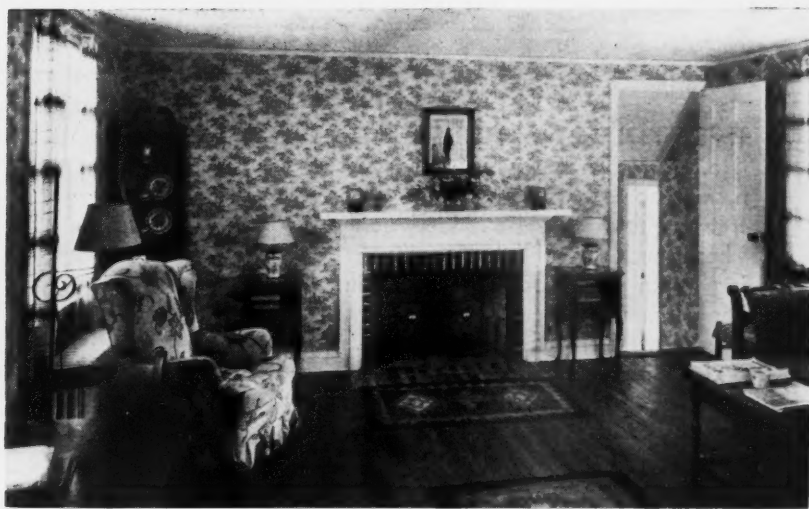
FLOOR PLANS of the two Colonials designed by Randolph Evans show an understanding of modern living, and are worthy of careful study. The plan at left, illustrated above, is simple and unusually effective. The attached garage treatment is good. The kitchen is compact and well arranged. Below are plans for the house illustrated on opposite page in which a new and interesting arrangement is achieved. The long living room in the center is well handled.

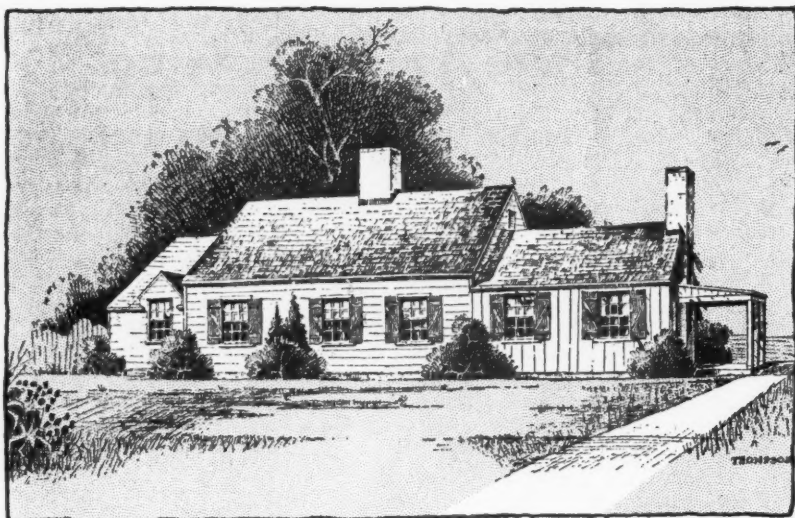




Two Architectural Long Island Gems

WIDE CLAPBOARD SIDING painted white, green shutters, and a green shingled roof are features of these new Long Island Colonial homes designed by Randolph Evans. A new and modern note is set by Mr. Evans in the design of these fine small homes, which are distinctly in the low cost field.

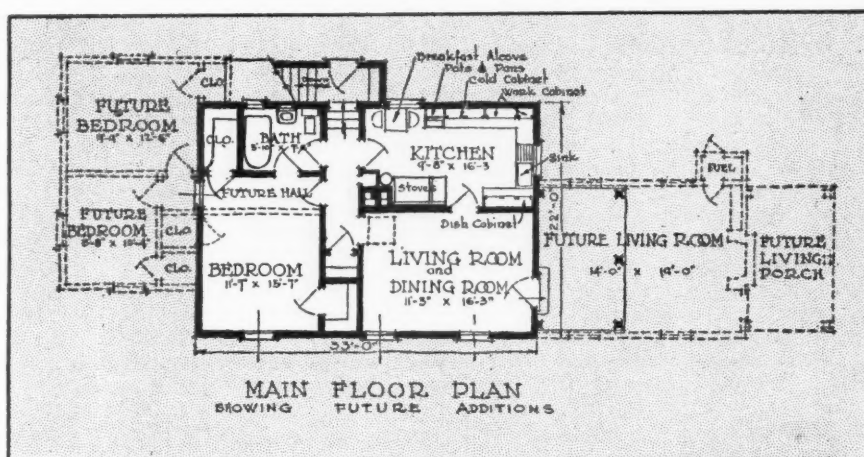




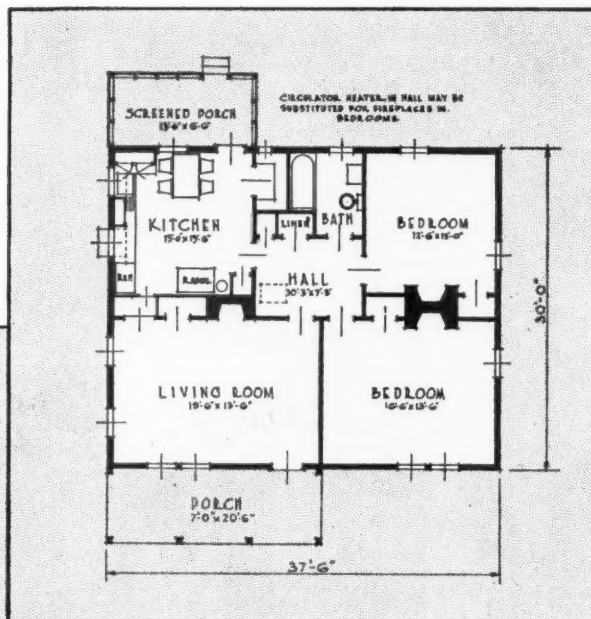
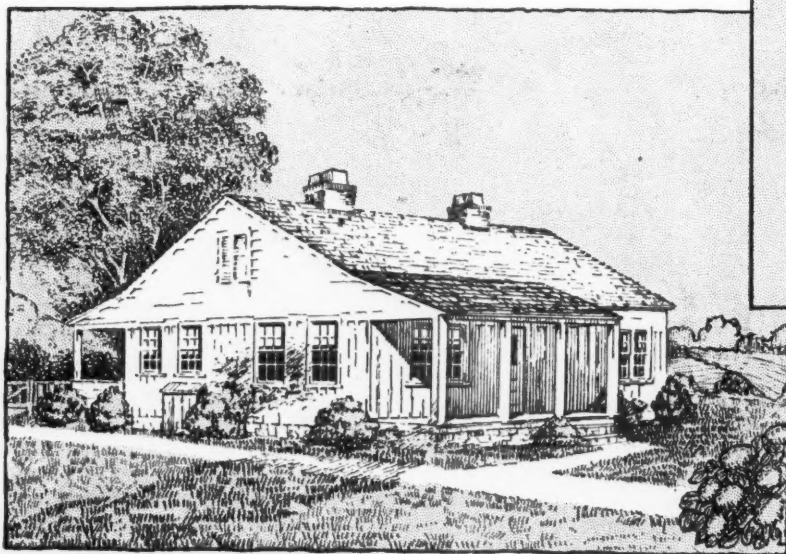
Farm House Plans for 1935

THE U. S. DEPARTMENT of Agriculture working with agricultural colleges of 46 states has assembled a selection of 100 farm house plans for which complete blueprints are available at low cost through the state agricultural colleges. Four of these farm house designs are presented on these pages and are recommended for the study of builders contemplating farm construction.

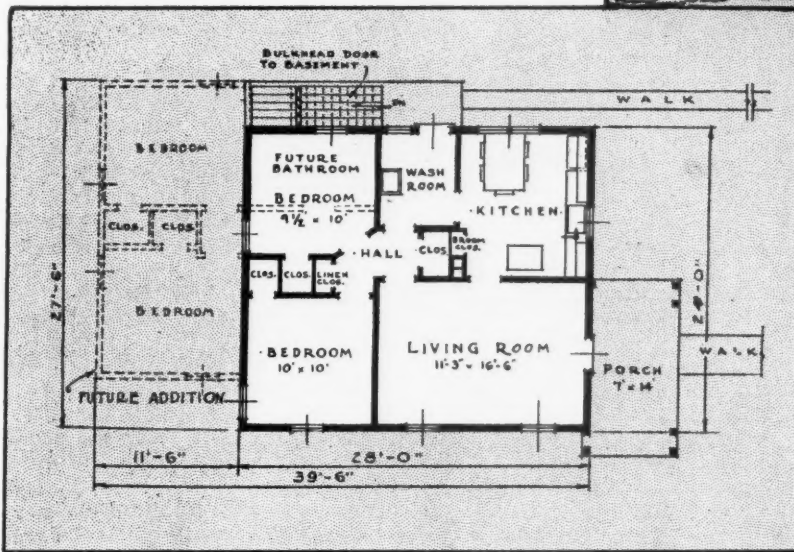
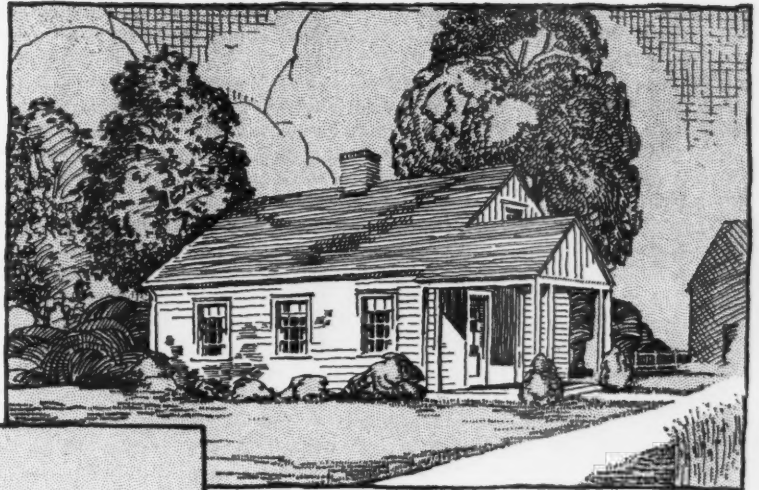
THIS SIMPLE FARM HOUSE design (No. 6525) can be built originally as a small home only 33' x 22'. Two extra bedrooms may be added easily when needed, and later on the living room extension may be built. The kitchen is considered the most important room of the farm house, and in this design is located for maximum efficiency. Cost Key of first unit is .887-110-726-31-12-10.



THE FARM HOUSE BELOW is design No. 6530, particularly suitable for Alabama and other Southern states. Heat may be provided by a circulating heater in the central hall, in which case the double fireplace between the bedrooms would not be needed. Screened porch opening off kitchen is used for both work and eating purposes. Extra bedrooms may be easily added at right of plan, taking space for hallway off back bedroom. Cost Key is 1.324-135-1125-47-16-17.

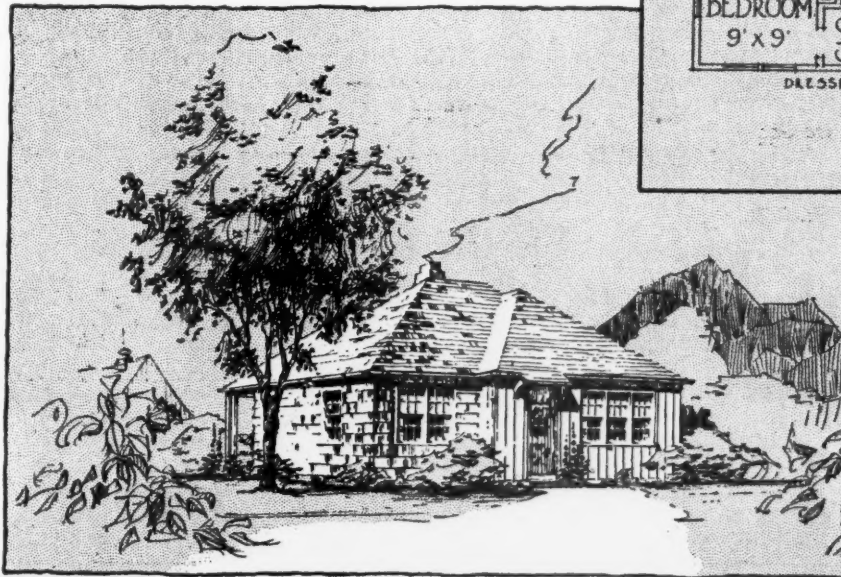
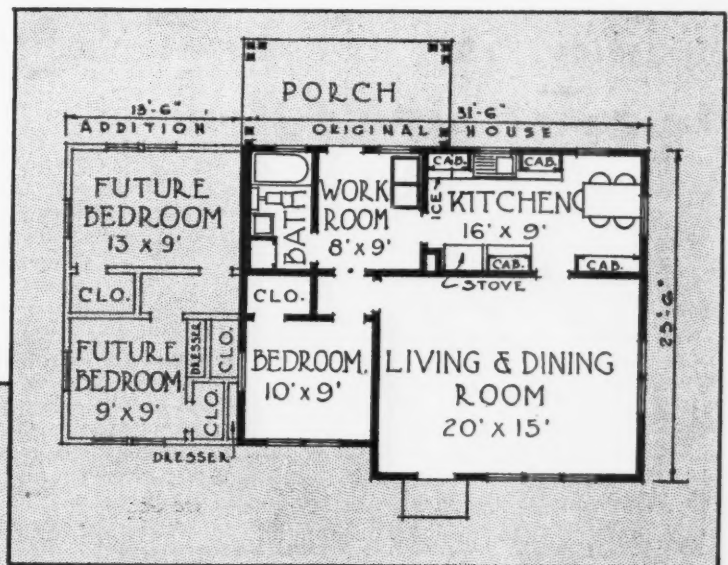


Practical, Low Cost Rural Designs

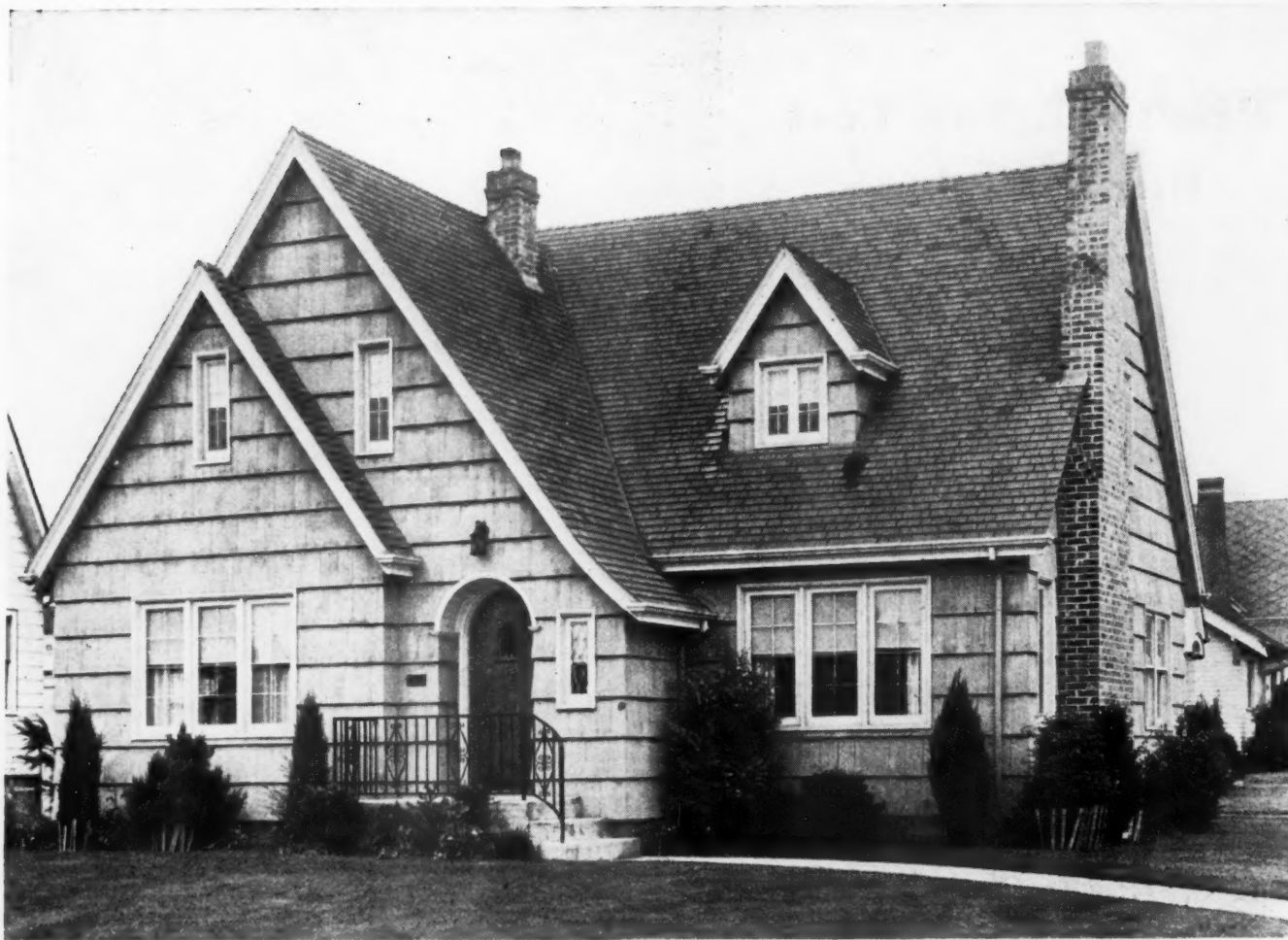


FARM HOUSE PLAN NO. 6514 shown above is well adapted to Northern or Midwestern conditions, and should be built with basement and furnace. An important feature is the wash room adjacent to kitchen. This wash room may be extended out over the back porch to include the stairs to basement—a desirable protection in stormy weather. No bathroom is provided in the original house, as it is planned for very low cost. When additional bedrooms are added, however, the bathroom is provided for. Cost Key of first unit of house is .872-104-672-29-12-10.

FOR KANSAS AND THE MIDWEST, farm house design No. 6519 shown below is well suited. The exterior is pleasing and the plan practical and well arranged. The work room placed between bathroom and kitchen is good, and space provided for dining at one end of kitchen is desirable. Addition of the two future bedrooms can be done with minimum expense. Cost Key is .923-110-776-33-10-13.



IN PLANNING FOR 1935 DON'T
NEGLECT THE FARM MARKET
—ONE OF THE BIGGEST OF
ALL TIMES

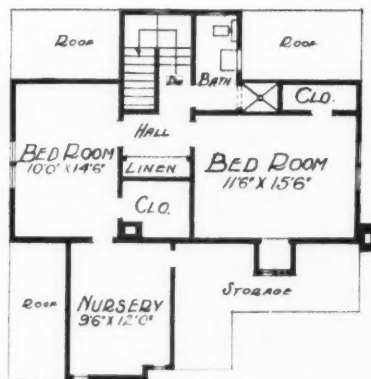


Cedar Shakes Used in New Tacoma Home

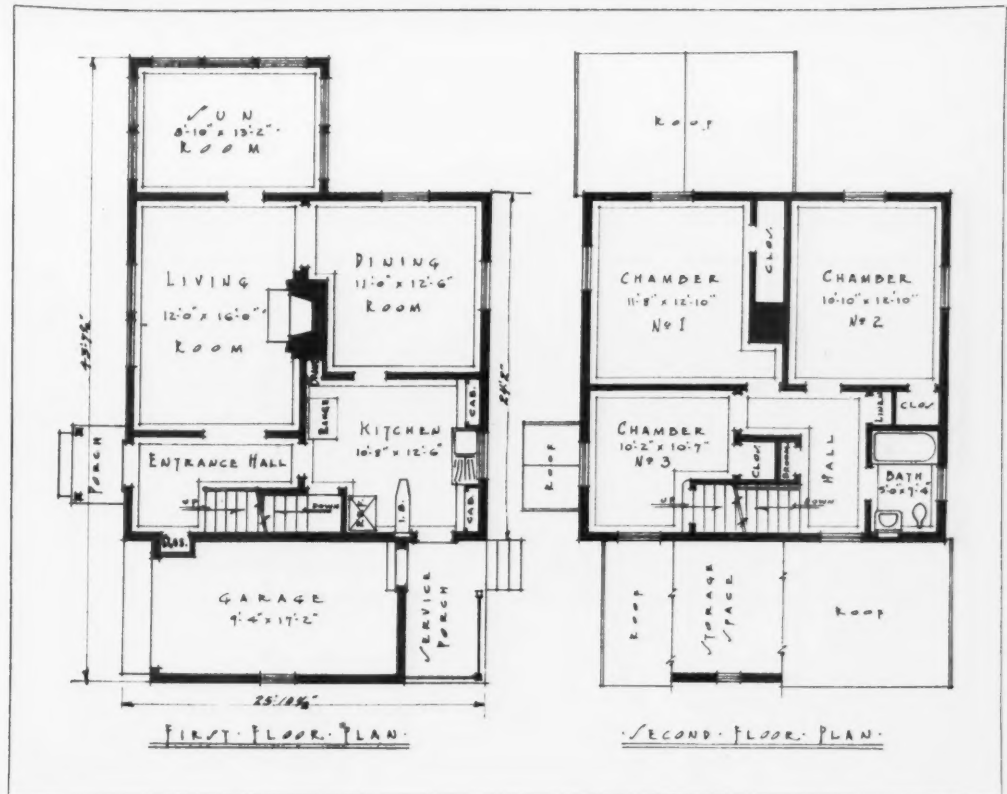
SOFT GRAY-GREEN CEDAR SHAKES laid double 15 inches to the weather give a sturdy, homelike appearance to this Tacoma, Wash., residence designed by Norman Jardeen, architect. Cubic contents are 19,850 cubic feet. Cost without lot was \$4,350. Equipment includes electric refrigerator, water heater, hot air furnace, oak floors, mahogany interior trim. According to Architect Jardeen, the slightly projecting eaves and the low sweep of roof are features that enhance the appearance of the home.



FIRST FLOOR PLAN



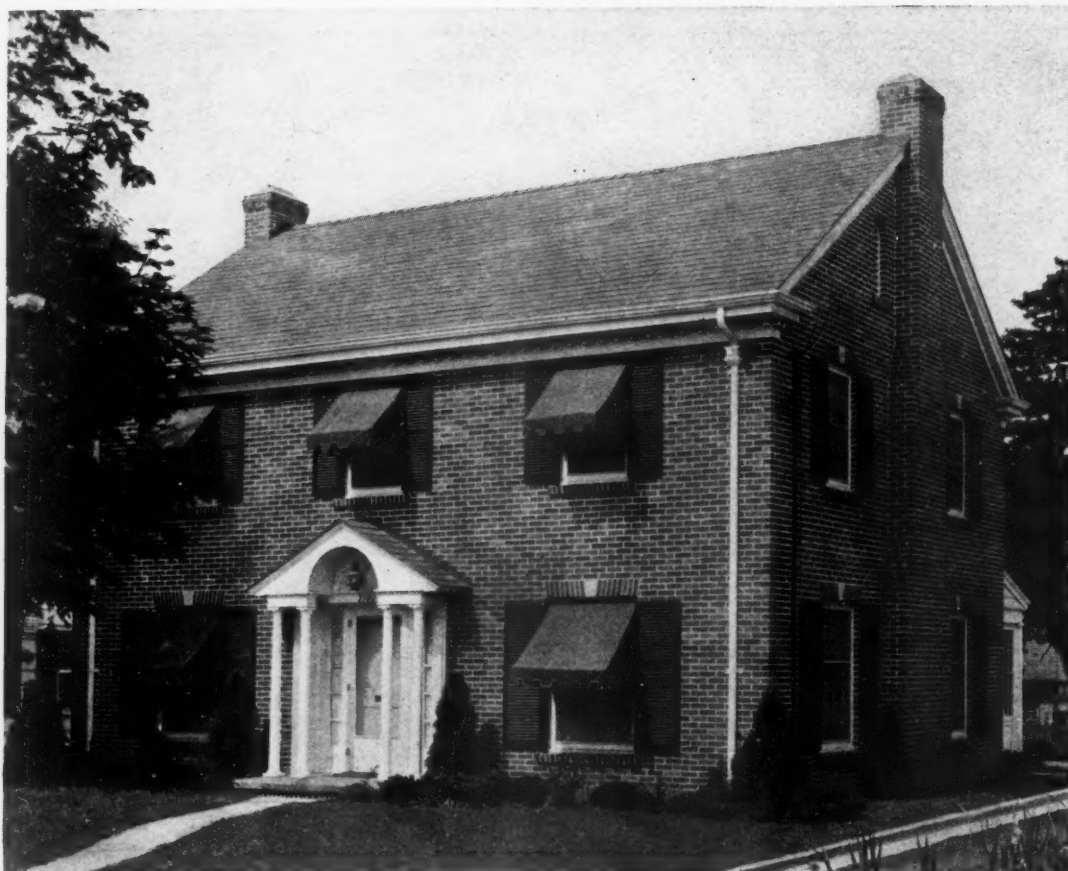
SECOND FLOOR PLAN



A Popular Home in Connecticut

ARCHITECT CARL E. SEGERBERG of Middletown, Conn., designed the house shown below, and it has proved very popular. Cubage is 21,060 feet. The plan is compact and well arranged. The main body of the house is only 24'2"x25'10 1/2" yet the house contains a good sized living room and dining room and three satisfactory bedrooms. The sunroom and garage balance each other, giving symmetry to the design.



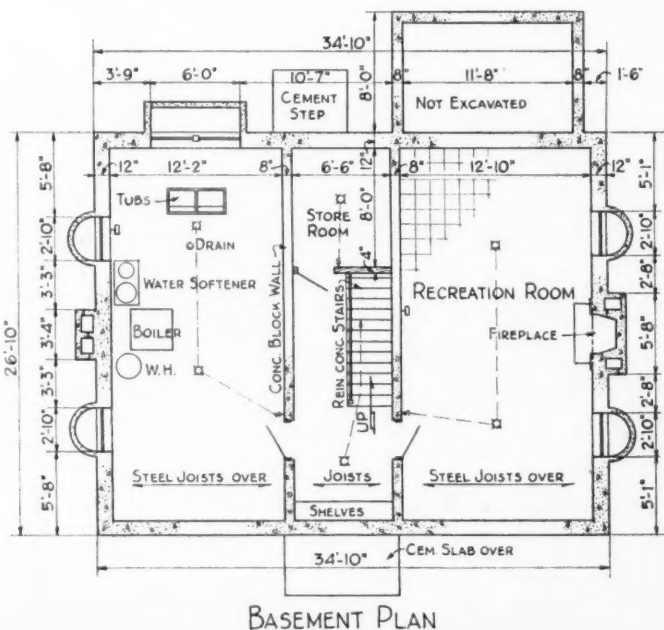
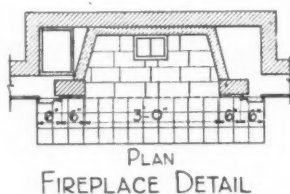
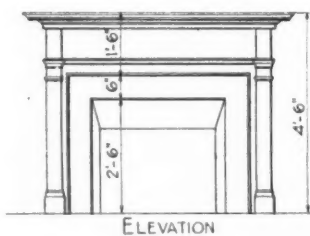
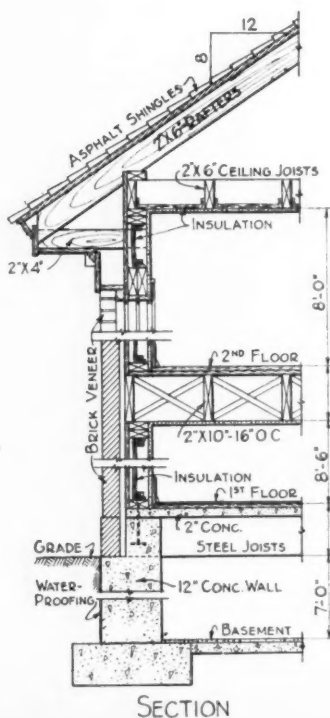
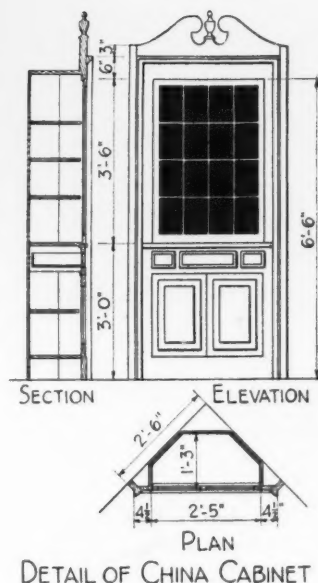


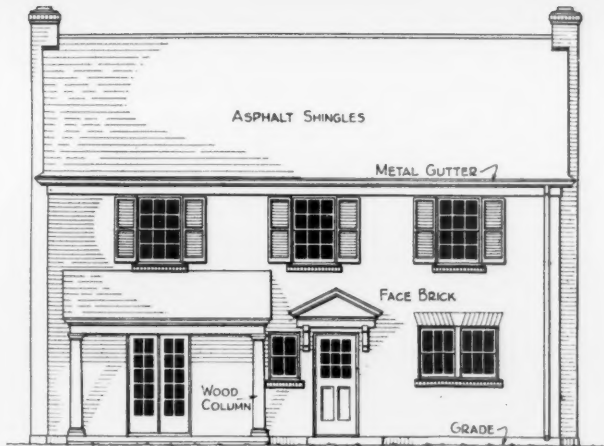
Concrete First Floor

A CONCRETE first floor built with reinforced concrete joists is an outstanding feature of this well built home. A rough board floor was laid over the concrete and carpeting in dining room, hall and living room laid directly on the boards, saving the cost of a hardwood finish. In the kitchen linoleum was laid.

ALTHOUGH ONLY 34'10" by 26'10" in size, this substantial Colonial home looks impressive and provides splendid living accommodations. The 13' by 25' recreation room in basement with fireplace is important. Balsam wool insulation is used on side walls and mineral wool in attic. American Radiator vacuum steam system is used with Trane in-the-wall heating units with humidifiers. Walls are decorated with Sanitas. Kitchen has tiled sink, ventilating fan, package receiver, all modern equipment. Floor plan is practical, yet spacious, with ample closets, good light, well proportioned rooms. House was completed March 30, 1934, by Harry Hurni, Kalamazoo, Mich., builder.

Cost key is 1.842—
123—935—39—25—14

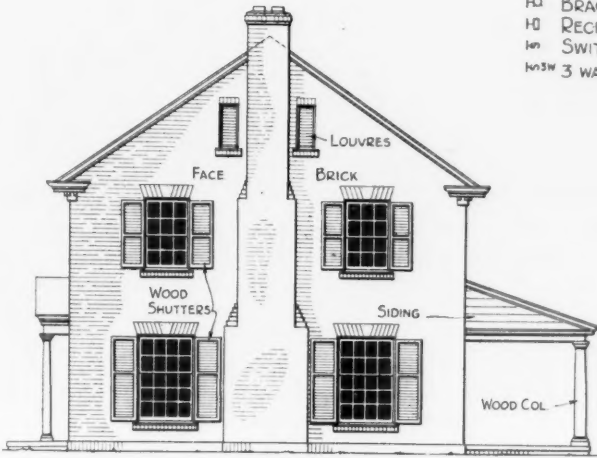




REAR ELEVATION



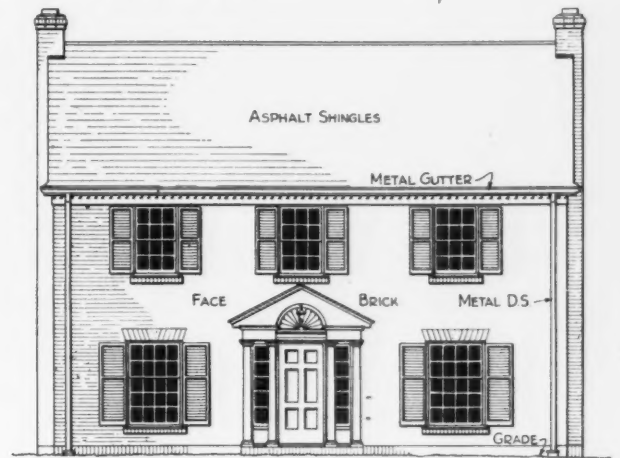
SIDE ELEVATION



SIDE ELEVATION

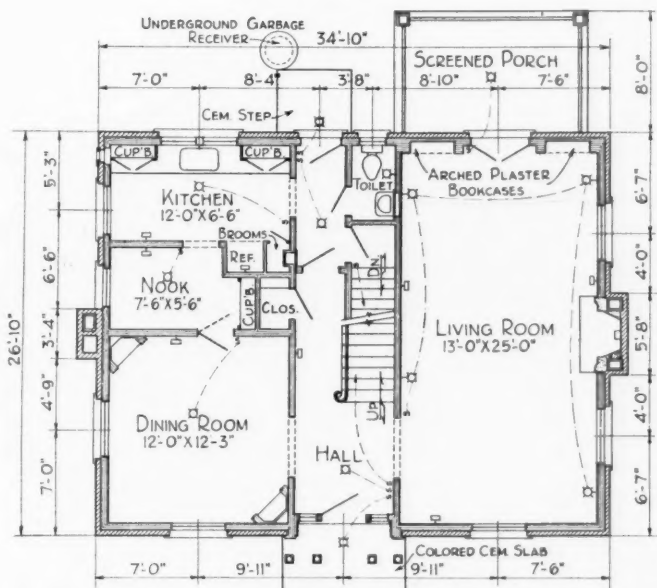
ELECTRIC SYMBOLS

- CEILING OUTLET
- ⊞ BRACKET OUTLET
- ⊞ RECEPTACLE IN BASE
- ⊞ SWITCH
- ⊞ 3 WAY SWITCH

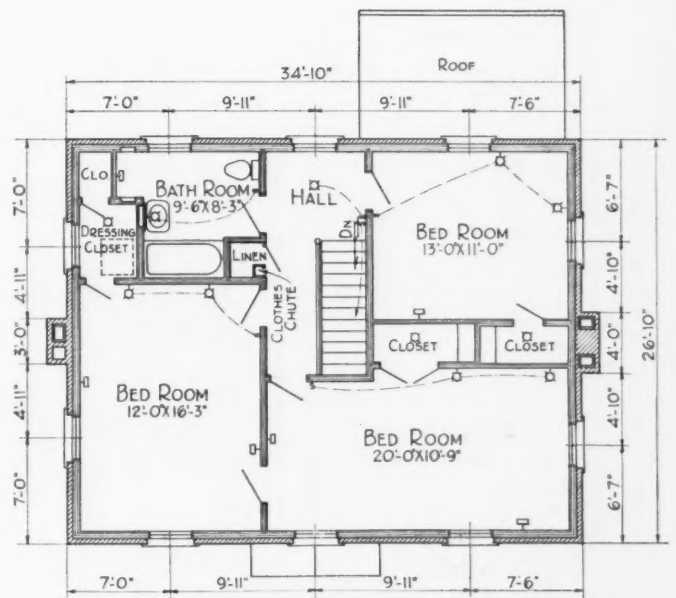


FRONT ELEVATION

0 5 10 15
SCALE IN FEET



FIRST FLOOR PLAN



SECOND FLOOR PLAN

PLANNING FOR Stores and Commercial Buildings

THE store and small commercial building market is one of the most inviting for the construction industry today, and many contractors are making definite plans to increase this work in planning for 1935. More than 50 per cent of the 1,549,000 retail shops and stores in the United States require major or minor alterations to meet new merchandising conditions. Rapid changes in shopping habits and in store and commercial building styles have created a market for 35,000 new structures of this type.

Modernizing of stores and shops is leading all other forms of building in the adoption of interestingly styled modernistic effects. Metal, structural glass, wood veneers and new types of composition materials are widely used in modern stores. Lighting effects have been greatly changed and the newer stores, such as those popularized at the World's Fair, go in for unusual indirect lighting and striking effects that stop the passersby.

Building analysts point out that already a vast volume of rebuilding of shops, stores and commercial buildings has taken place in the larger cities. The smaller communities and outlying districts are now due for a great development in this line, and it is in these communities that the local contractor has the greatest opportunity to develop profitable jobs.

The field for store and commercial building modernizing has been greatly extended by FHA, which provides financing on easy terms for this type of work with no down payment required.

The trend in store modernization is towards greater compactness and maximum use of small areas. The

small shop located in the most accessible spot in town has greater potentialities than the large rambling structure out of the beaten path. The first step in developing a modernizing job is the analysis of local conditions to find spots where pedestrian traffic is greatest, and in these spots to propose building or rebuilding of structures that will take advantage of this traffic.

That the small store, well planned, is most efficient is shown by the fact that the average chain store doing a \$3,000 weekly business uses a space 35 x 60 feet. The average size of Woolworth's and Kresge's stores is 40 x 150 feet, and the size of the average shoe store, as developed by several of the largest chains, is 20 x 100 feet. Drug stores average 20 x 80 feet.

Plans of the building should be carefully sketched out with a view to studying the counter space required, width of aisles, storage, display areas and work areas. Additional space may frequently be acquired by opening up an entrance to the basement. Preliminary examination of structural conditions is essential. Practically all store modernization work calls for structural changes involving carpenter work, brick work, stone work, concrete.

Experts in the various fields of store and commercial building design should be consulted where a local architect is not available. Many of the store front manufacturers maintain design departments for the assistance of contractors. Exhaustive studies have been made of store operation and design, which are of assistance. The local power and light company has access to the latest data on indirect lighting and use of electric signs as part of the architectural design. These should be consulted.

A SUCCESSFULLY PLANNED BUSINESS CENTER

By R. W. SEXTON

AS the population of a community increases, the residential area naturally expands with the result that the main business district, around which the town or village originally grew, becomes inaccessible to many of the new residents and a demand arises for one or more secondary business centers to cater to their needs. The location of these business centers must be carefully determined in order that property which has been improved by high class residences will not be depreciated in value by business buildings being erected in the immediate vicinity.

The residential area of Pelham Manor, a suburb of New York City, has extended far beyond its original lines during the last ten years or so. The main business center has been greatly expanded to meet these new conditions, but the need for additional business centers in outlying districts has for some time been evident.

When the suggestion was made that a business building be erected on this site, the authorities insisted that its design conform to the standards of good taste that prevailed in the neighborhood and stipulated that the building line be placed fifty feet back of the street to afford parking space for the stores' customers. This

was probably due to the fact that the through traffic on the Boston Post Road is very heavy.

The building as built and approved by the zoning authorities was designed by Bowden & Russell, architects, and is suggestive of early English half-timber architecture. There are nine stores on the first floor with a second floor over part of the building devoted to office space. Seven of the nine stores were rented from the plans and all the office space on the second floor was leased before the building was completed.

The building is constructed of steel framing, with the front walls facing the two main streets of brick, coated with stucco in panels formed by chestnut timbers, one and one-eighths inches thick, also applied over the brick. The rear walls are of cement blocks, stuccoed. All the store fronts are of copper with chestnut doors. All the woodwork is finished in antique stain.

The walls and ceilings of stores no. 1 to 6 are finished in white plaster, with painted pine trim and maple floors, while in the stores no. 7, 8 and 9, which are located in the one-story wing of the building, the walls and ceilings are also finished in white plaster, with the rafters exposed on the ceiling, stained trim and stained maple floors. In



WELL PLANNED STORE GROUP done in English architecture, Pelham Manor, New York; Bowden & Russell, architects.

all the stores, lavatories are finished with tile floors and base and Keene cement wainscots. Partitions between stores are of gypsum blocks finished with plaster.

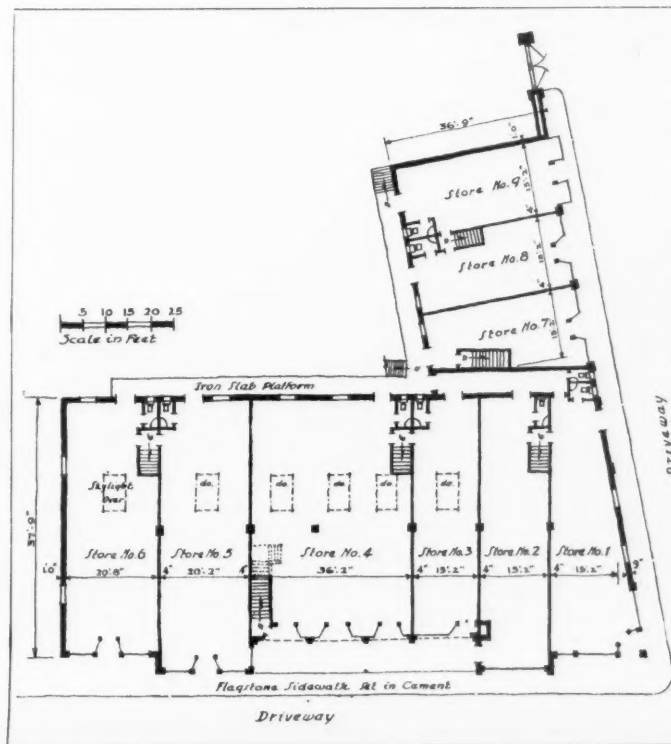
The stairs in the stores leading to the cellar are of steel construction with cement treads, while the main stairs leading to the second floor are also of steel construction with terrazzo treads and steel risers.

All offices on the second floor are finished with rough plaster walls and ceilings, painted pine trim and oak floors. Window frames are of wood with metal sash. The floor of the second story corridor is of terrazzo.

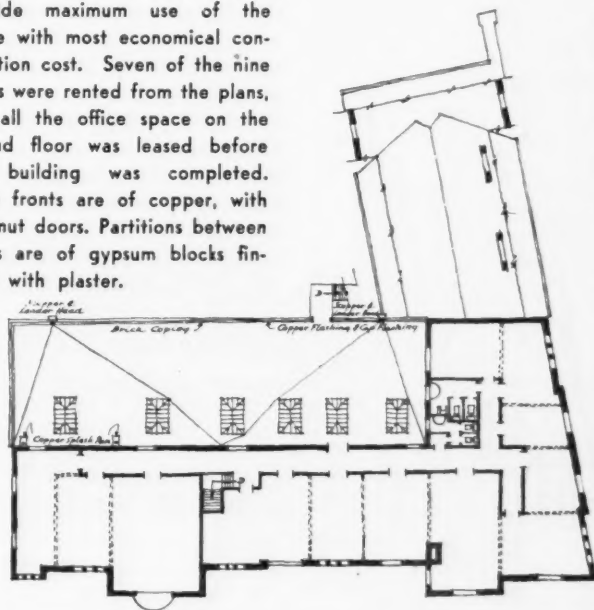
Skylights over the stores are of copper with wire glass, set in the roof which is finished with gravel.

Adjoining the building at the right is a wood gate which leads to a rear court where all store wagons are loaded and all deliveries are made. The zoning authorities particularly stipulated that delivery wagons of all kinds be kept out of sight.

The building contains 350,000 cubic feet of space and was completed in 1932 at a cost of approximately 20 cents per cubic foot. In the lease of each store it is stipulated that no projecting signs are allowed.



FLOOR PLANS of the Pelham Manor store and shop project provide maximum use of the space with most economical construction cost. Seven of the nine stores were rented from the plans, and all the office space on the second floor was leased before the building was completed. Store fronts are of copper, with chestnut doors. Partitions between stores are of gypsum blocks finished with plaster.



PLANNING

By H. A. HEIMBECK
Designer and
Construction Engineer



FARM IMPROVEMENTS

An Example of Complete Planning and Modernizing In a Field That Shows Great Promise for 1935

THE improved financial condition of farmers in most sections is responsible for a greatly renewed interest in the condition of farm homes, buildings and equipment. Prospects for 1935 farm work are brighter than they have been in years.

The author of this article, Mr. H. A. Heimbeck of Rock Island, Ill., designer and construction superintendent, has recently completed an amazing remodeling and rebuilding of an extensive farm development. The procedure followed and the construction and planning methods are so sound that they merit the study of dealers and builders in this field. In this first article, Mr. Heimbeck discusses the general layout and plan. In later articles he will describe technical details of the individual improvements involved in this project.



HOW THE OLD BARN and group of run-down farm buildings looked in May, 1934, before the rebuilding of the farm property took place. Old structures were practically useless.

THE purchaser of a farm at Hamlet, Ill., realizing the potential value in this particular tract, decided to put it in shape, remodel and rebuild the farmstead to fit new farm needs and make an attractive and suitable home for his family.

The farm and farmstead previously operated was an example of deteriorated buildings, tumble down fences, broken trees, untidy surroundings and wreckage of worn out machinery. After six months of construction the farmstead group has become an orderly arrangement of practical farm buildings erected for convenience of operation and efficiency of production.

Most of the old buildings of the old farm group were beyond repairs, and inasmuch as they would not fit into the new scheme, it was decided to wreck them and salvage as much as possible for the new program.

The principles of design and arrangement were decided upon after the enlistment of information from various sources. Special consideration was given to valuable or objectionable features of design and construction on other farm groups.

All buildings have reinforced concrete footings and walls; all concrete floors are reinforced with salvaged wire fencing. Foundations are poured 18 inches above established grade. All buildings are wood frame with wood sheathing, painted white with blue black asphalt shingle roofs. The main farm buildings, the barn, corn crib, hog house and service building are gambrel roof framed with 2x6 studdings 24 inches on center with 2x6 rafters and drop siding for wall sheathing. The remodeled hay barn with an old girt frame is gable roof with new barn boards and battens. The cattle and machine shed is gable roof with 4x6 girt frame and barn boards to match hay barn.

The owner's house and garden occupy the Southeast corner of the farm court with the small fruit and orchard to the West. To the North and back of the house is the service building, a triple-purpose building for two cars and a service link between the house and barn with a workshop, pump house and milk house. In line with the service building and to the West will be the poultry house with poultry run alternating with kitchen garden between the buildings. Across the farm court is the corn crib with feed floor connecting with hog house to

the East. To the East of the hog house and North of the service building is the main general purpose barn for horses and cows with silo connecting. Along the lane to the North is the hay barn and combination machinery and cattle shed providing shelter, feed and storage. A concrete drive into the farm court connects the service building and farm house with the road.

The picture of the old barn is typical of all other buildings of the old farm group which were wrecked. Practically all the framing of this old barn, which probably is 50 years old, was in very good condition, too valuable to destroy, and inasmuch as another barn was required in the new building program, it was decided to remodel the present structure.

A new concrete foundation was poured in place about 100 feet from the old building. All roof and side wall sheathing was removed. Supporting posts were cut off about 18 inches up to where they were in good condition, and new sill put in place. After the old frame was squared up, it was moved to the new site, and two lean-tos were added with old timbers for framing. The old roof boards were replaced for roof sheathing. New barn boards and battens, new trim, sash and frames, and asphalt shingles were purchased.

This remarkable improvement amounted to less than \$1300.00. A worthless structure was converted into a valuable building applicable to the other new units erected. The improvement was sufficient to warrant the expenditure.

* * *

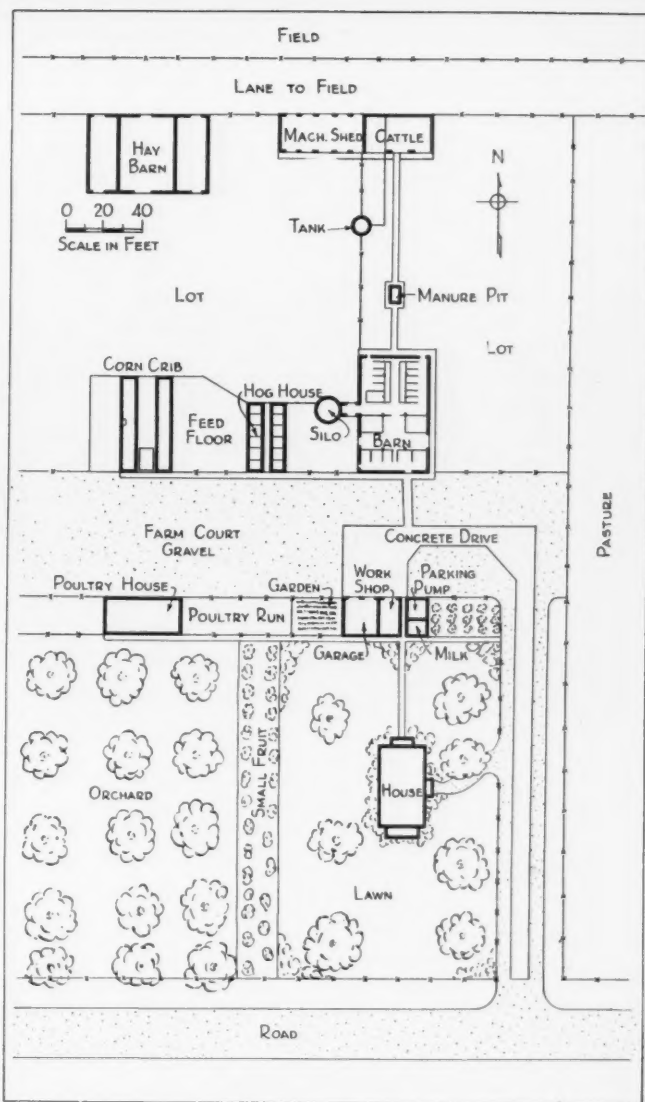
FHA Survey Shows Farm Interest

THE extent of farm homes and out building repair and improvement contained in a summary of visits to farms made by field representatives of the Federal Housing Administration indicates that farmers are utilizing the Modernization Credit Plan or Title I of the National Housing Act. Borrowing from their local lending institutions sums averaging about \$500 a family, farmers are using the money to repair, rebuild and otherwise improve their homes, barns, out buildings and equipment. Reports from cooperating banks, material dealers, utility companies and first hand observations on farms in various parts of the East, Middle West and near far West, show farmers are again building, repairing and remodeling their places, with prospect of greater activity during the coming spring and summer.

The list of work done during the fall and winter to date includes not only seasonal requirements such as painting, roofing and installation of heating plants, but also remodeling and enlarging homes, installation of water, bath and electric light and power facilities, deepening or drilling new wells, erecting wind mills, building silos and remodeling barns to handle livestock more efficiently.

The general improved financial condition of the farmer in most sections, despite current obligations, is responsible for his renewed interest in the state of his home, buildings and equipment. With prospects brighter than they have been in years, business houses and manufacturers who deal largely with farmers expect greatly increased building during the coming year. They base their optimism on surveys they are making of the rural field anticipating spring business. Banks are receiving an increasing number of applications.

Pearl French of Mora, Minn., who carved a home out of 80 acres of brush and cut-over timber land, has a state loan on the farm as well as a mortgage on his per-



LOT PLAN OF THE MODERNIZED farm property showing location of the important units in relation to each other. The entire layout and placement of structures and equipment were carefully planned in advance, and the property completely renovated.

sonal property. An increasing family made a larger home necessary, but owing to the mortgages he could not borrow to build. However, as soon as the Federal Housing Administration plan became known to him through publicity in his farm magazine, he obtained a loan of \$600 with which he converted his two-room home into a six-room modern farm residence.



FIFTY YEAR OLD HAY BARN which was remodeled at cost of less than \$1300. The framing was in fairly good condition. New roof, side walls, concrete foundation and floor had to be placed.

DETAILS FOR BETTER SMALL HOMES

HOW TO BUILD ATTRACTIVE ENTRANCES

P.M. TORRACA ARCHITECT

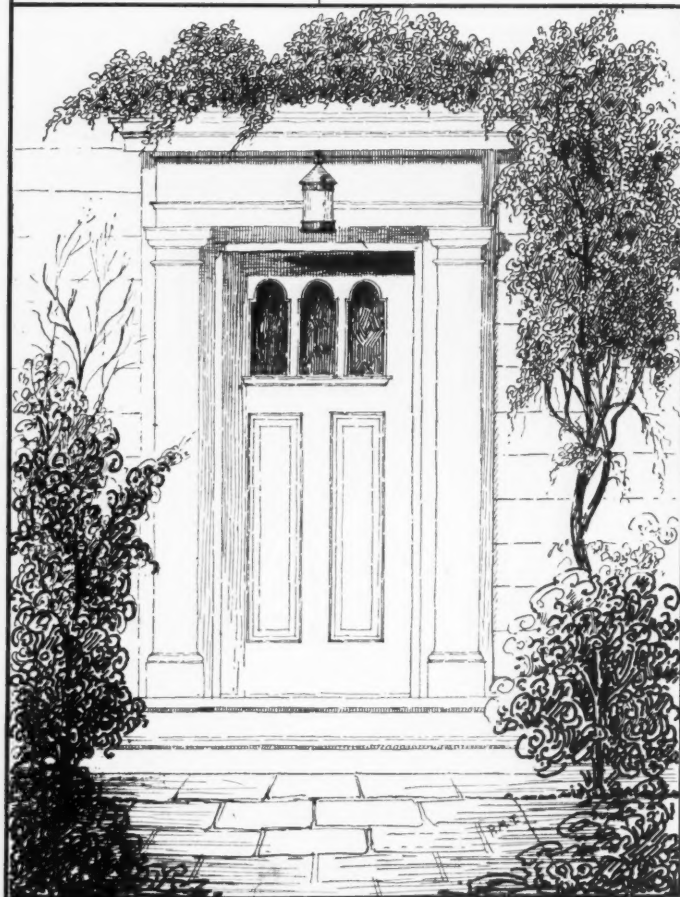


FIG. I

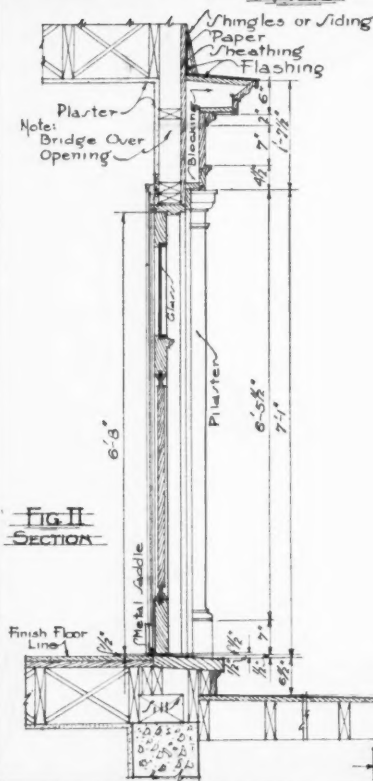
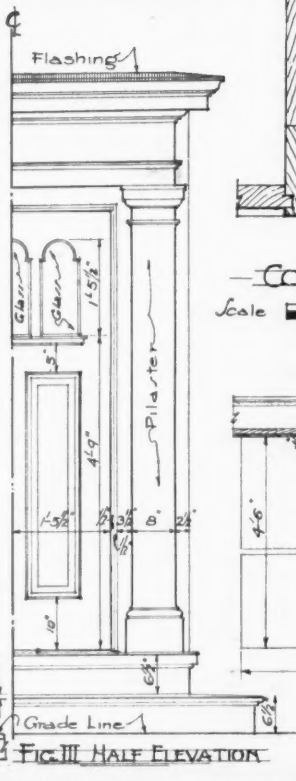
FIG. II
SECTION

FIG. III HALF ELEVATION

GOOD PROPORTIONING, SCALE and simplicity are features of this entrance, and it can be constructed economically. Head of opening (Fig. II) is bridged, and framing is doubled to prevent sagging. Metal flashing of cornice should be carried up at least 8 inches over the sheathing and carried down over the fillet of the crown mould. Copper flashing, 16 oz., is recommended. If sheet steel is used, it should be well painted on the underside before being placed, and on the top after being placed; 28 U.S. gauge minimum thickness. Pure sheet zinc, 11 gauge, may also be used for flashing, in which case it should be fastened in place by zinc-cleats.

Construction of the jambs and frames is indicated in Fig. IV. Note that the opening is framed by double studding. Figs. V and VI show detailed drawings of the cornice and plaster cap and base. These details are carefully dimensioned and should be followed exactly to produce good proportions and beauty. By proper attention to detail a small entrance of this type can be made as beautiful as the more expensive types.—P. M. TORRACA.

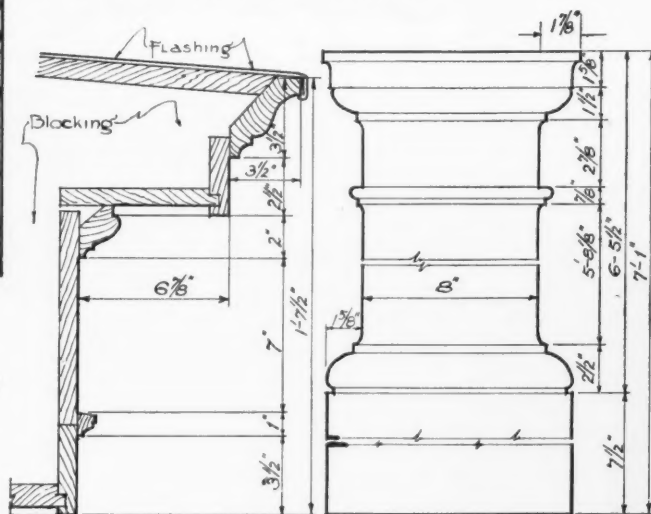


FIG. V

FIG. VI

CORNICE DETAIL

PILASTER DETAIL

Scale 1 2 3 4 5 6 7 8 9 10 11 12 Ft.

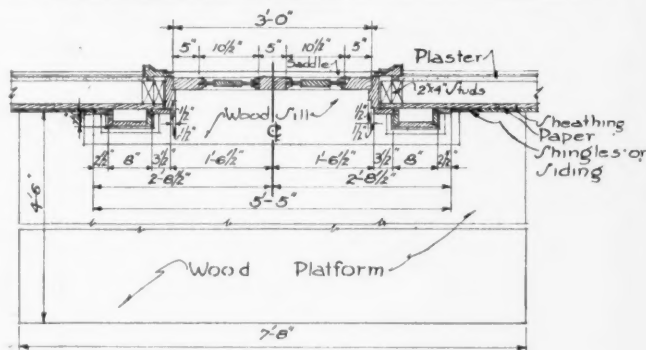
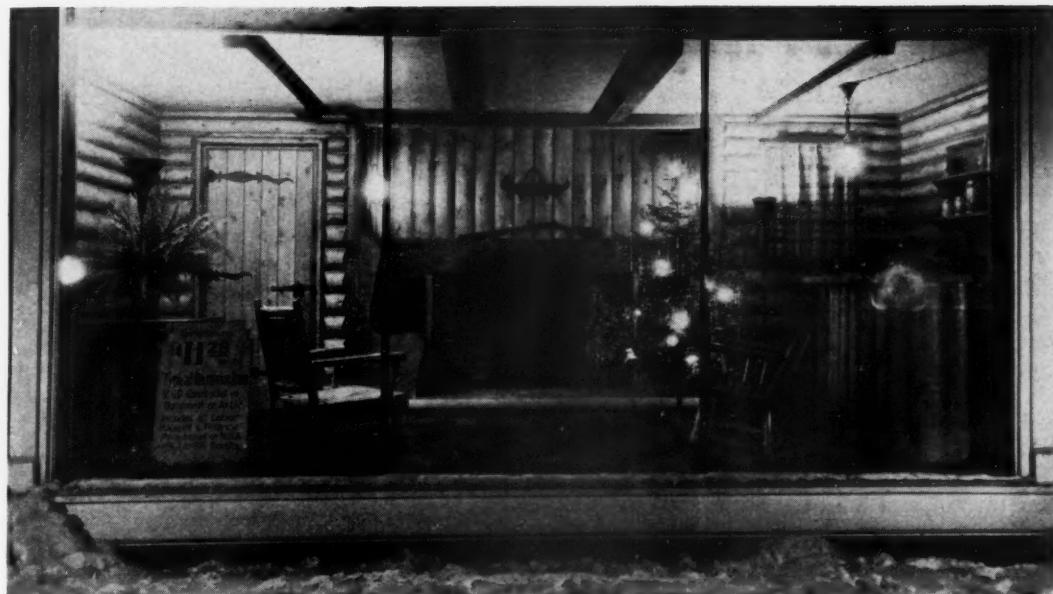


FIG. IV PLAN

SCALE 1 2 3 4 5 FEET

MODERNIZATION



Window Displays Attract Buyers

THE BASEMENT RECREATION ROOM above and the modernized attic shown below are demonstration rooms in the windows of the Foote Lumber & Coal Co. of Minneapolis. Rooms are arranged so that customers can enter and examine details carefully. Seated in the rustic rocker in front of the fireplace the prospect has no difficulty visualizing what the salesman is talking about. It is a setting for effective selling.

NOTICE THE SIGNS in the windows: the recreation room is priced at \$11.28 per month, including materials and labor. The striking attic remodeling job is advertised at \$7.28 per month. Half of the attic space is left unfinished while the other half demonstrates proper use of blanket type insulation and decorative insulating board. The display is an example of first class merchandising of the type that creates business.



Teamwork Wins in Modernizing

Proper Planning Backed by Proper Performance Produces a Worthwhile Result

By RICHARD P. GOODNOW

STIMULATED by the Federal Housing Program, the repairing and renovating of homes is now expanding and flourishing like the green bay tree. It is rapidly assuming major importance throughout the land as a chief source of income for contractors, builders, architects, painters and interior decorators.

The unique story of such a job recently completed in a Cleveland home follows. It contains several aspects of more than ordinary interest. In the first place it shows how an alert contractor can spur a minor job into a major one, earning him over three times the originally planned income. Secondly, it shows how architect and contractor can by teamwork win the home owner as a loyal friend, despite the job costing triple the amount set aside for the work.

This is a just exemplification of the famous slogan originated by Mr. E. C. Simmons, the Hardware King of the 90's: "The recollection of quality remains long after the price is forgotten."

Presenting the true story of renovizing the home of Mr. and Mrs. William N. Bayless, Lakewood, Ohio (suburb of Cleveland)—a job based originally on the idea of the simple addition of a breakfast room and the enlargement of the master bedroom; a job which, when completed, however, had covered a thorough modernization.

An enterprising architect, hearing from an alert contractor friend that some modernizing was being considered, called to look the house over. In company with the owners he spent a half hour walking from room to room, looking, appraising, measuring, tapping the walls and examining closet spaces.

"I'll work this out accurately," he said, "and will then submit complete blueprints for your approval. In those plans I am going to incorporate several changes and additions that will notably increase the architectural beauty of your home and grounds."

"For example?" queried Mr. Bayless.

"Well, I would suggest a Colonial vestibule or entry way so visitors would not step from outdoors directly into the living room—rather into a vestibule with coat closets on either side. Then you can eliminate that inadequate coat closet in the back of the living room and use that space for knocking out the rear wall and putting French doors there, opening on a flagstone terrace, overlooking your garden.

"With a garden wall at one end of the terrace and protection of flowering shrubs at the other you would have the necessary privacy to entertain or dine out of doors.

"Then your kitchen," turning to Mrs. Bayless, "is a light, well proportioned room but badly out of date in furnishings and equipment. It should be modernized throughout."

"Wait a minute," cautioned Mr. Bayless; "what about the cost of all this?"

"I can tell you better when we have made up the plans and specifications. But I'll tell you this—you need not go through with these additional alterations after you've seen the cost estimate if it is higher than you think you can afford."

When the plans and specifications were submitted, Mr. and Mrs. Bayless examined them with interest that rapidly grew into appreciation and delight. There were two closets in the larger bedroom, an unusually large breakfast room which included a bay window overlooking the garden. The roof of the breakfast room provided for a sun deck or sleeping porch.

The blueprints were turned over to three building contractors for estimates. And the resulting figures were something of a shock to the Baylesses.

"Whew, that's a lot of jack," exclaimed Mr. Bayless, "but it does practically make over the house."

It was finally agreed to go ahead with the work. The job was awarded to Alfred Hoagland who was not the



THE NEW terrace, overlooking garden in back. Ordinary window was replaced with these French doors opening into living room. Terrace paved with flagstones, with bent lawn grass growing between. New sun umbrella over table and chairs to match in blue and white, for dining outdoors.



NEW vestibule at front door. Vestibule painted white; door an antique bottle green. Fan-light transom above. Down the brick steps in front curves an iron railing painted green to match door. Coat closets occupy each side of the interior of this vestibule. Bloodgood Tuttle, Architect; Alfred Hoagland, Contractor.



VIEW looking into new breakfast room, showing bay window overlooking garden at rear. In each corner at this end of room is a small open cupboard in wall, across the corner. Interior of these niches painted vermillion, and unseen electric lights hidden above give their interior a soft indirect glow.

lowest bidder but the one in whom they had the greatest confidence. The work was put on a cost plus basis.

About three months later found the Bayless family in their renewed home.

Beginning then with new entry of Colonial design containing a coat closet on each side and proceeding into the living room where there were but a few changes; from the living room we go through the new French doors out onto the terrace.

The terrace, made of solid earth and raised about three feet above the yard to overlook the garden, is paved with flagstones in odd shapes. Enclosing it is a low white railing, with the posts set six feet into the ground to give the necessary stability; it is not the usual flimsy, shaky type that soon works loose. At the farther end of the terrace is a high brick wall painted white, topped by trailing vines. In this wall, the appearance sought by the contractor was an antique effect; the mason was told to lay the brick rough and unevenly. So cunningly did the mason achieve this effect that he completely mystified his experienced Italian helper, Joe. Joe had always seen his boss lay up brick with meticulous precision, and watched this piece of bricklaying with growing astonishment.

"Whatsa matter you?" he finally said, frowning at the seemingly botched job, "are you craze?"

A commodious breakfast room was added to the back of the house, with a bay window overlooking the garden. This was fitted with French windows and sliding roll screens. The walls were painted vermillion, with window draperies and rug to match, while the floor is so dark

it appears black. This gives the room a predominant color scheme.

White bookshelves were built in the sunroom. Ivory Venetian blinds were installed in all windows downstairs and the master bedroom. New lighting fixtures were added throughout the home—modernistic in design in kitchen, breakfast room and bedroom; Colonial elsewhere.

Description of the changes in the kitchen have been reserved to the last because Mrs. Bayless' "workshop" was completely modernized. A new modern sink in two compartments, with solid black linoleum drainboards extending clear around the cupboards, replaces the old one.

Over the stove was installed a hood equipped with exhaust fan and hidden light; a built-in electric refrigerator on the other side of the room. The decoration of the kitchen has been carried out in strictly modern fashion—white walls, an odd but engaging shade of blue on the ceiling, strips of chrome trim in cove at ceiling and baseboard completed with modernistic chrome fixtures.

The garden at the back of the house has been completely redesigned by Forrest H. Jennings, landscape gardener. His new arrangement gives the yard an appearance of greater depth and beauty.

Thus, with the creative artistry of the architect, Bloodgood Tuttle, plus the intelligent craftsmanship of the builder, and their absolute co-ordination in bringing these ideas to life, they have brought added charm and beauty to the home of Mr. and Mrs. William N. Bayless.

Making Modernization Pay

by E. L. GILBERT

FORECASTS for 1935 indicate that modernization, repair and alteration work will be at least 100 per cent greater than it was during 1934. It may mount to much higher figures. Not counting all the smaller jobs, it is estimated that about \$7.30 will be spent on the average for every person in each community; multiply the population of your area by \$7.30 and you will have your own estimate of the total amount of business possible or probable. It will be a conservative estimate.

With this outlook based on deferred demand, which is at last making itself felt, it is also well to remember that at no time during the past has there been any such opportunity as exists today for financing this type of work.

1935 will be a pretty good year. A little study of current conditions must needs convince the most pessimistic that modernization, repair and alteration work will be well worth going after in 1935!

Community campaigns to create modernizing work are under way in more than 4,000 cities and towns throughout the U.S. at present and national publicity via newspapers, radio and other media is helping to persuade the public to once more spend money on the home. This is all constructive and helpful for each home town building industry group . . . the trick is to tie-in with these activities. Both dealers and contractors can do this with real profit—as many are doing already.

Almost everybody knows of the tremendous efforts being made by the Federal Housing Administration to promote modernization and repair work; so far, for in-

stance, it is reliably reported that the number of mailing pieces sent out from Washington exceeds the total number mailed in the course of the Liberty Loan Drives.

In addition, several manufacturers have developed modernization credit plans which cooperate with or are similar to the FHA financing plan. Many of the larger manufacturing organizations are sending out thousands of direct mail pieces, using radio, local and national advertising, all to help each local building industry group to get more business.

This is selling on the national scale; everything done along those lines makes it easier for local building industry groups to obtain greater results from their own efforts.

"Bringing Home the Bacon"

Modernization and similar work can be done on the flat fee per job basis, on cost-plus or on straight bid. It is important to know costs and check extra carefully all bids submitted; if there is any question of "grief" to come, it is wise to include in the contract clauses to take care of unexpected cost items.

To make the most profit out of modernization requires going after the jobs in earnest. Direct mail, advertising, personal selling—all play their important parts. The point is—to make this type of business *most* profitable—every possible effort must be made to "bring home the bacon" . . . including all the plans which have worked well in the past.



REAR PORCH
2054 NO. KOSTNER AVE. IRVING PK. BR.

HUNDREDS OF PORCH ENCLOSURE JOBS like this are being done, Edward Hines Co. of Chicago reports. Just a small job, but the owner spent \$50 for lumber, \$20 for millwork, \$10 for wall board, \$3 for hardware and \$37 for labor. He now has a livable extra room instead of a useless, cold porch.



REAR PORCH-BEFORE
2054 NO. KOSTNER AVE. IRVING PK. BR.

Leading Newspaper Backs Building

Hartford Times Sets Up Home Building Institute

A PERMANENT exhibition of home building materials similar to the one located on Park Avenue in New York City is not a new idea, but an exhibition of a like nature sponsored by a newspaper and maintained in its own plant is a new development.

The Hartford Times in Hartford, Connecticut, has recently opened its newly enlarged exposition which is called The Hartford Times Home Building Institute, which has been in the process of development now for nearly three years since the start was made in a small room on the mezzanine floor.

In the exposition are represented the leading concerns in the sale of lumber, insulation, tile, floor covering, paint, wallpaper, oil burners, hotwater heaters, brick, fireplace units, roofing materials, flooring, bathroom fixtures and others.

There was a formal opening recently which was attended by the Mayor of Hartford, the Federal Housing officials of the State and City, contractors, distributors and retail dealers. The effort has been splendidly received not only by the residents of Hartford and vicinity but throughout Connecticut. There is a steady stream of visitors to see the displays which are constantly being promoted by the newspaper. The newspaper makes no charge for the space occupied. The exhibit is, of course, put in at the expense of the exhibitor. All of the exhibitors from time to time help in the matter of keeping the Institute before the mind of Hartford people by advertising frequently in the Saturday issue of the newspaper when several pages are devoted to home modernizing, building, real estate and equipment.

The Institute is at the same time sponsoring a very complete house to house survey which is being conducted by capable, experienced men in an effort to uncover all prospects. A great amount of valuable information is coming to the Institute every day through this activity, and all leads pertaining to each branch of work is turned over to those in the Institute who are participating in the cost which, by the way, is nominal.

This survey will extend over a six weeks period. One of the surprising features of the result of the survey is the information brought in of names and addresses of people who plan to build new homes. In most cases they have their own building lot but have made no plans, stating that they intend to get underway very soon. A great number stated that they had their own financial resources. In other cases, they wish to learn more about the Federal Housing Financial Plan.

The Hartford Times felt that this idea opened up tremendous possibilities and they moved their engraving



Consulting Room in Times Home Building Institute

plant from the mezzanine to the top floor and cut through a new entrance directly from the Institute to the street. The use of the room has been turned over to organizations of all kinds for meetings, mostly in the evening and some in the afternoon, without any charge. Many are taking advantage of these facilities. The idea is to bring as many people as possible into the Institute.

A fully equipped electric kitchen is installed in the Institute and it is planned to have cooking demonstrations there once a week or oftener. Many events, also, which will prove most interesting to men have been planned at which the Sporting Editor will be the host. Already bridge clubs meet in the Institute. There have been many meetings of grocery associations, contractors' organizations, druggists' organizations and others, at which there have been from 150 to 200 in attendance. The newspaper feels that this is a natural outgrowth of its activities dating back to the fall of 1928 when the Hartford Times Modernizing Bureau was organized which proved of great value in stimulating modernizing work all through 1929 and later.

An architect and extra photographers were hired. Photographs were taken of old residences. Visualized sketches were made showing how these homes could be changed to conform with modern lines, and sun-porches, extra rooms, bathrooms, etc., added.

A great deal of help was given to the people at little or no cost in order to stimulate the work.

Contractors, distributors and dealers quickly responded to the newspaper's effort and in the first Saturday issue that the plan was announced, seven pages of advertising and news were devoted to that feature. The interest steadily grew and all through 1929 the Hartford Times published in its Saturday issue no less than twelve pages of advertising and news dealing with modernizing—and frequently ran as high as sixteen pages. It was able constantly to print pictures of work that had emanated from the Bureau.

Through the years that have intervened since then, Hartford has been completely conscious of the modernizing movement.

The survey, referred to previously, reveals a tremendous amount of work that is planned to be done. Already one of Hartford's banks, The Capitol National Bank & Trust Company, has made far more loans than any other bank in Connecticut. The building activity in the Hartford area is definitely underway.

American Builder desires to co-operate with influential newspapers everywhere in their constructive efforts to promote local building activity.

Guide to New Materials and Equipment

A Summary of Some of the Developments of the Past Year with Comments on New Products

THE outstanding development in new materials and equipment in 1934 was the interest shown in products for modernizing. These materials received unusual emphasis and many interesting new products were placed on the market, and a number of well established products were given new uses.

Increased interest was shown in wallboards and panel materials. Decorative insulating boards which provide inexpensive new interiors with interesting effects are being widely used. A number of manufacturers added new products in this line. An interesting development was the treatment of wallboards to resist termites, moisture and deterioration.

New panel materials, such as asbestos sheets marked like tile, or finished with marble surfaces or in plain colors, have been improved and developed. The use of phenol-resinoid finish materials in colorful patterns and marble effects increased.

Structural glass made progress during the year as a modernizing material, especially in connection with store fronts, and in bathrooms and kitchens. The use of glass brick was developed. These are laid with standard mortar, provide a translucent, colorful wall. The vacuum type bricks are said to have good insulative value.

In structural materials further development of light weight steel beams for residential use was outstanding. Another development was the precast concrete joist which becomes a part of the firesafe first floor, is inexpensive, and provides an 18 to 25 foot unsupported span on 24 to 36 inch spacings.

In the field of lumber and millwork, treated lumber should be mentioned. Lumber treated to resist termites, decay and deterioration made great headway in 1934 and will undoubtedly be important during 1935. Grade and trade marking is on the increase. Quality lumber, properly identified, is on the increase. An interesting development was the further use of end matched lumber, and packaged lumber delivered ready for use.

In connection with lumber, the development of modern timber connectors is of importance. The use of metal rings—the "split ring" on the alligator—avoids cutting and fitting of timbers and provides greater sheer resistance. The effectiveness of timber work was greatly increased by the use of these connectors which are sunk into the timbers and drawn together by bolts through their center.

Continued progress in the use of insulation was made in 1934, and it is certain that the homes of 1935 will be better insulated than any in the past. The use of mineral and rock wool insulation in bat form greatly increased. A new prod-

uct of interest is the aluminum foil type of insulation, which was also put on the market in a new form, cemented to kraft paper.

Mention should be made of the further use of aluminum paint which is being widely accepted in the industry. Casein paint received new attention in 1934 due to its wide advertising at the World's Fair. Special wallboard paints that do not soak in or spoil the sound-absorbing qualities of the material have been placed on the market.

Interior wall finishing, such as thin gauge linoleum, in attractive patterns, has made progress. The linoleum wall coverings are easily washable, retain their colors and stand up well. Flexible wood veneer surfaces which consist of thin layers of actual wood mounted on a cloth background and are cemented in place made progress.

In home equipment, there has been an interesting development in air conditioning equipment and in warm air heating embodying many of the important features of air conditioning. Forced warm air, washed, filtered and properly controlled, is very popular.

Due to the small building volume, builders' equipment in 1934 received less attention than usual. New power equipment was developed which will tend to speed up construction work and reduce costs. A large number of

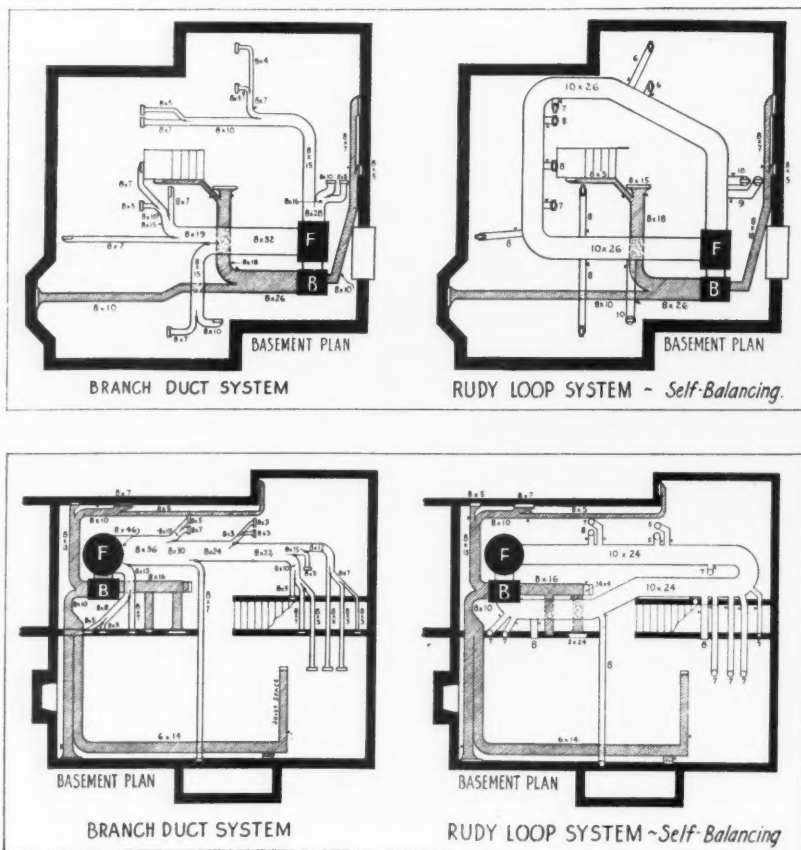


Diagram contrasting branch duct heating system with the new Rudy balancing loop system.

newly designed, fast operating, strongly built pieces of power equipment will appear in 1935.

In the brief outline given above, it has been possible to touch on only a few of the current changes and improvements in building materials and equipment. Included in the new products of the last few months are the following items:

Simplified Forced Air System

THE Rudy Furnace Company has developed a simplified piping system for forced air jobs, known as the Rudy Self-Balancing Loop System. A single continuous trunk duct of constant size is used, together with an extended plenum chamber. Installation cost is said to be 20 per cent less than the branch duct system.

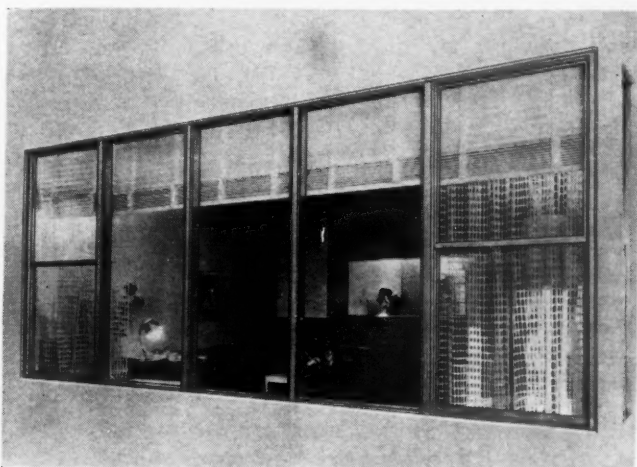
Under this improved system, both ends of a loop are connected to the furnace bonnet, and a fan keeps a constant pressure in the loop. Air flows through the branches at the same velocity. Frictional resistance is reduced by the right angle branches, eliminating the turbulence created by Y branch dampers. The loop system lends itself especially to revising a gravity job into an air conditioned system.

One-Unit Aluminum Window

AN advanced type of weight-hung window, made of aluminum and designed in simple, striking lines for residential use, is now being made by the Kawneer Company, Niles, Mich.

Sash, frame and weights are built into one unit, glazed and ready for quick installation. Wide mullions, hitherto considered unavoidable between double-hung windows, are reduced from approximately 5½ inches to 1 inch. These narrow mullions, together with narrow sash members and frames, admit more daylight for any given window size than does ordinary construction.

Many unique advantages are claimed for the new window. Shrinking, swelling, warping, rattling, rusting and rotting have been eliminated, and thus the causes of most window difficulties removed. The solid aluminum sash and frame members withstand the elements indefinitely without further protection or renewal. Upkeep and maintenance expense have been reduced to an absolute minimum. Sash operate with slight effort, and fit snugly against the frame, slide on integral weatherstrip guides, and effectively keep out rain, snow, wind or dust.

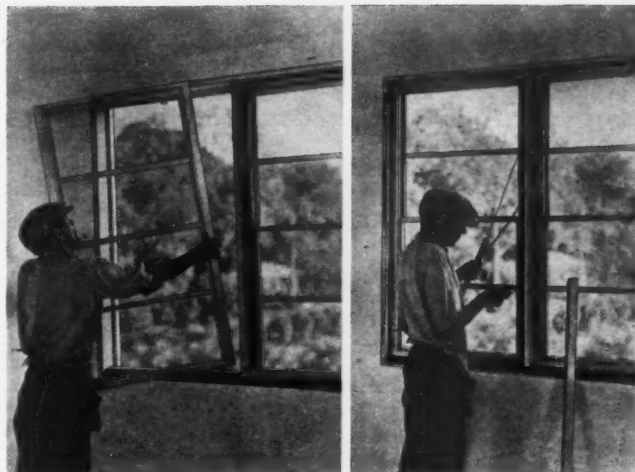


New type aluminum window installed at Exhibition of Contemporary Art, New York.

New Cement Asbestos Board

A NEW and inexpensive building material that meets a wide range of uses in wall-surfacing structures is asbestos Flexboard, recently introduced by Johns-Manville. Made of asbestos and portland cement, the board is fireproof, does not rot nor disintegrate and is flexible enough to be applied to considerably curved surfaces; can be sawed and nailed like wood and applied as easily as fibre board.

Decorative Flexboard is furnished with a smooth, lustrous wax finish in four pastel shades—green, buff, rose or slate. The pig-



Sash come glazed and installed in frame; weights are easy to reach. Note narrow mullion on new type aluminum window.

ment is mixed with the asbestos and cement during the process of manufacture, making the color an integral part of the board. There is nothing on the surface to chip or crack and it can easily be kept clean with a damp cloth. Colored Flexboard affords opportunity to provide interiors with the color schemes so much in demand at present. The asbestos fibres in the material give it an attractive texture and it has been found a desirable wall covering in kitchens, bathrooms, corridors, lobbies, show-rooms, restaurants, lavatories and countless other places.



New asbestos cement board with tile finish installed in modern kitchen.

Resilient Metal Lath System

THE new Red Top Metal Lath System perfected by the United States Gypsum Company, Chicago, is an important development in metal lath plastering construction. The system, by the use of spring clips, provides a practical method for resiliently attaching and furring metal lath in virtually all types of work. The resilient attachment provides a cushioning effect for the plaster finish which results in such important advantages as: 1. Insulation against transmission of sound from one room to another. 2. Maximum protection against cracks. 3. Elimination of lath or joist streaks and discoloration from treated lumber, etc.

The system employs standard metal lath construction and is attached to supports on the resilient spring clip provided by the system. It is applied by the lather.

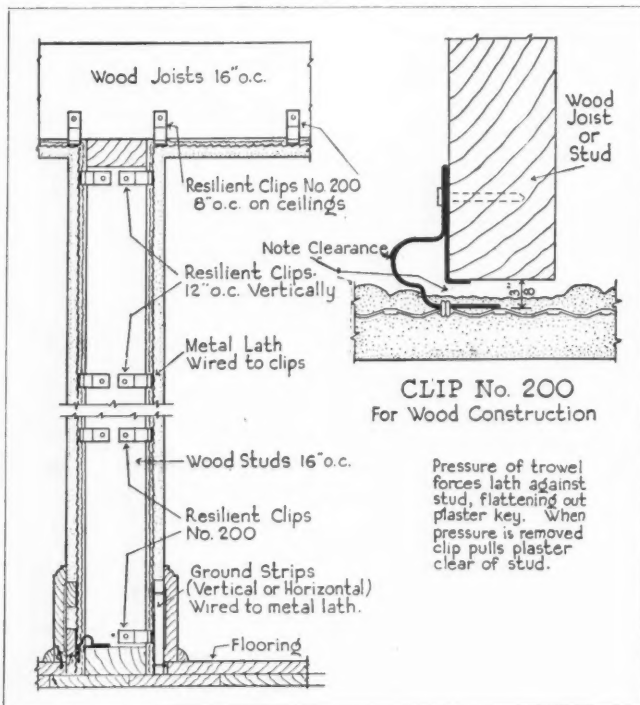
For use in the new metal lath resilient system, five different types of clips and a special steel channel stud and seat are available. The five clips make possible the application of the system to practically all types of residential and commercial buildings.

An outstanding feature of the metal lath resilient system is a greater sound reduction value than ordinary types of plastering construction. When properly installed, the system will function practically as efficiently as other more costly methods of sound insulation. The sound reduction provided by the system is approximately the same as a double three-inch tile wall construction having a two-inch air space.

While metal lath assures crack-resisting plastering construction, it is made still more efficient when attached to the supports by the spring clips used in the resilient system. The spring clips are designed to absorb movement which is apt to occur in the structural framework of a building and prevent an ordinary movement from being transmitted to the plaster finish.

Another important advantage is the elimination of lath and joist streaks. This feature is especially important in air conditioned buildings. Discoloration from treated lumber is also eliminated. The spring clips provide furring for the plaster finish and avoid direct contact with the supports that are responsible for surface marks, etc.

The only materials used in the Red Top Metal Lath Resilient System that are not used in regular metal lath construction are the resilient clips and the special steel channel studs for partitions. For the small cost of the clips, sound-resistive construction, maximum protection against cracks and elimination of lath and joist streaks and discoloration are provided.



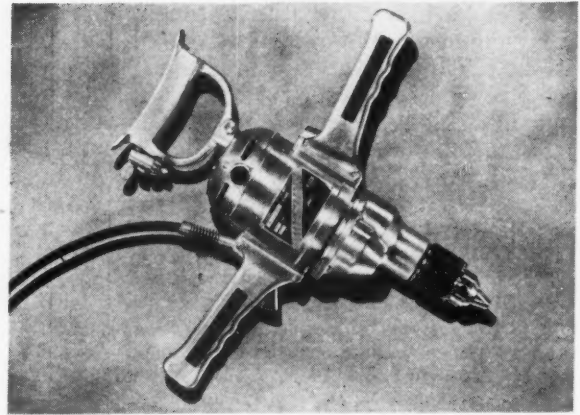
Details of installation for new resilient metal lath system that prevents passage of sound.

NEW 5/8" Standard Drill

THE new Skilsaw 5/8-inch standard drill has as its first major point a specially designed motor which delivers substantially more power under load for a drill of this size. The motor is of the Universal type, for operation on D.C. or A.C., 60 cycle or less (all voltages) and the armature is statically and dynamically balanced to eliminate vibration. Field and armature windings are baked in Bakelite and varnish.

The drill is housed in a die cast aluminum alloy body—a feature which means increased strength and lighter weight, greater accuracy, interchangeability of parts, a dense surface and many other advantages not found in ordinary sand castings. Smoothness and reliable performance are guaranteed by the use of New Departure ball bearings, and by micrometric precision in the manufacture of the heat-treated alloy gears and shafts.

Other noteworthy features are: Compactness and light weight (15 lbs.). Free speed, 500 R.P.M. Genuine Jacobs Chucks. Extra capacity (100 per cent overload). Bakelite enclosed switch with patented Snuff-Arc construction for long life.



Smoothness and reliable performance are achieved in new 5/8-inch standard drill.

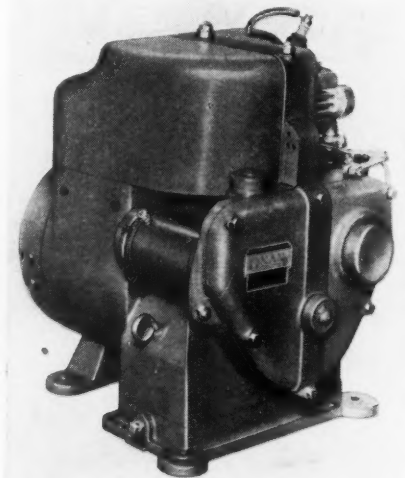
Modern Light Plants

D. W. ONAN & SONS, Minneapolis, are announcing a new line of modern A.C. electric lighting plants for 1935 in 300, 500, 1000 and 2000 watts capacity. Each is unit construction with generator mounted directly at the crank case of the engine.

These units bring to those in remote places the same current as city line users enjoy, and provide flickerless alternating current, 110 volt, 60 cycle which will operate any standard appliance.

The engines are four cycle, air-cooled, using 6 volt ignition, float feed carburetor, mechanical governor, 6 volt starting motor and storage battery with remote control for self-starting. All parts are standard to the automotive and electrical field and available from any source where parts of this kind are supplied.

Modern features: pressure feed oiling through the crank shaft, aluminum pistons and connecting rods, dynamic balance engine eliminating all vibration. Each is provided with socket base for rubber mounting making for very quiet operation. An extra silent muffler and flexible exhaust pipe is furnished.



Compact new electric light plant brings modern electric conveniences to remote places. Has many improved features.

Celotex Rare Wood Finishes

A NEW type of finish for interior paneling, which looks like rare and costly woods and marbles, has been placed on the market by The Celotex Company, Chicago.

Called Celotex Di-Noc finish, this product offers, in addition to full-color reproductions, a degree of durability comparable to the fine finishes used on present day automobiles.

Celotex Di-Noc finish is offered in reproductions of carefully selected cuts of materials such as butt walnut, Claro burl, crotch mahogany, Prima Vera, harewood, straight grain walnut and French walnut, Verdi antique marble and black and gold marble.

The finish will be available on Celotex Hard Board and Cemes-to Board. It also may be obtained, for special purposes, on asbestos cement board, plywood and metal. Finish and backing, as an integral unit, are furnished ready to apply.

SENSATIONAL PAINT TEST



**Shows
contractors how
to save
themselves
the grief of
premature
paint failures . . .**

(Mail coupon for complete picture story)

One of Indiana community homes painted with Eagle Pure White Lead. Two years later, when other paints had cracked and peeled badly, Eagle White Lead showed almost no signs of wear.



Remarkable paint test was made here

There are 100 homes in this northern Indiana community. Bothered with costly paint failures, the real estate management determined to find out once and for all what paint was most durable, most economical. Houses were divided into 3 groups — painted with 3 leading kinds of paint. Of the 3 paints tested, Eagle Pure White Lead was the only one that gave satisfactory service. Mail coupon for complete story.

Contractors can heave a big sigh of relief and forget about paint troubles. A remarkable paint test made on a whole community settles the question once and for all. It proves what house paint will stand up best under all conditions.

The test was made in a northern Indiana mill town. The 100 homes in the community were divided into 3 sections. Each section was painted with a leading kind of paint. In a short time,

two of the paints had cracked, peeled or discolored badly. They had to be touched up within two years. During the same period, the third paint—100% Eagle Pure White Lead—showed little sign of wear. The houses in this section did not need repainting until 5 years later!

The initial cost of Eagle Pure White Lead was approximately the same as the other paints—but its final cost was much less. It went on giving good service 3 years after the other two paints had failed.

There is a definite swing to quality paints everywhere. Save yourself from the grief of premature paint failures by specifying Eagle Pure White Lead for exterior work on all your jobs.

EAGLE *pure* WHITE LEAD

Boost the Better Housing Program
in your community. It is creating new
work for contractors.



MAIL THIS COUPON • The Eagle-Picher Lead Company, Dept. AB1 Cincinnati, Ohio. Please send me a copy of the folder that tells the complete story of the Indiana Community Paint Test.

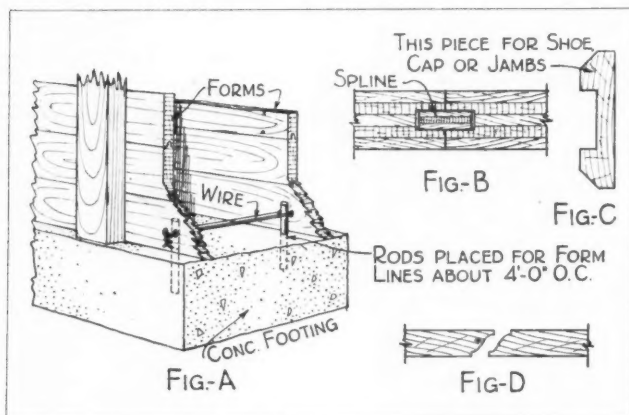
Name _____
Address _____
City _____ State _____

PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each item published. State business connection or trade.

Builder Helps

I AM herewith explaining several pointers which I have found useful. 1.—I keep a standard card file of 3" x 5" cards upon which I paste or write ideas, useful tables or formulas. Every now and then a job turns up in which these ideas prove very useful.



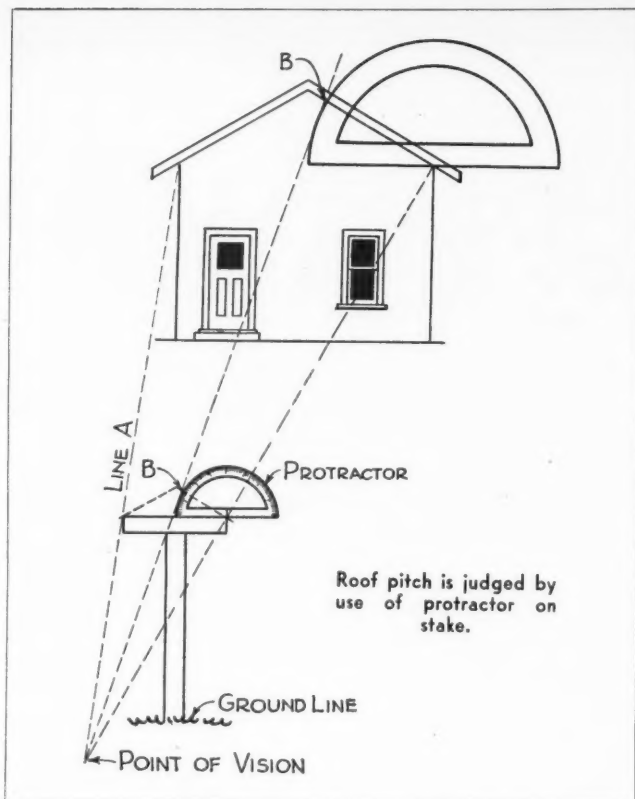
2.—In making an unbroken wall surface of any reasonable height or length, I use 1 inch plywood splined and glued with $\frac{1}{4}$ inch plywood (Fig. B), the outside grain of the spline running into the 1 inch pieces, thus forming a spline that will not split. This method is especially useful in store work where space is at a premium and such plain surfaces are necessary.

3.—Casing openings with the so-called OG edge, unless by use of mitered joints, is very expensive although widely used. It takes a great deal of time to cope these joints by hand. To do a good job quickly we have the ends of the side casing cut at the mill where purchased or by machine on the job so the ends fit over the OG on the head casing (Fig. D).

4.—When concrete footings are placed, it is a time saver to put short pieces of reinforcing rods in the green concrete on the line of wall forms. By wiring the forms as illustrated (Fig. A) the bottom will stay in place without further bracing.—RAY ASKA, Rockford, Ill.

Attractive Lawn Swing

FOR many years I have taken the AMERICAN

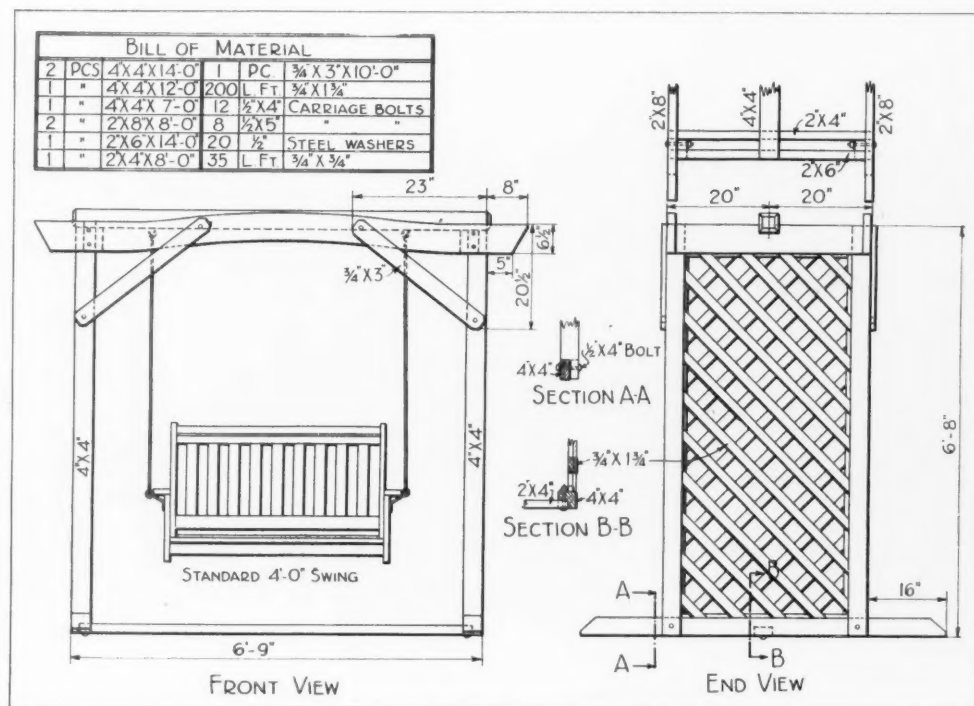


BUILDER. Enclosed I am sending you a drawing of a lawn swing that is installed in my yard that you may like to use.—C. M. JESPERSEN, Bartlesville, Okla.

Roof Pitch from Ground

WHEN it is essential that the approximate pitch of a roof be determined, as when estimating cost of repairing or remodeling a building, I use a method made clear by the sketch.

Of course, cross-bar on the stake should be the same in length as the base of the compass (or protractor) to be used. Where point B intersects the compass gives the angle, or pitch, in degree; user keeping line of vision across the top edge of stake cross-bar converged to exact width of building, as shown by dotted lines.—BERT W. CULBERTSON, Jackson, Miss.

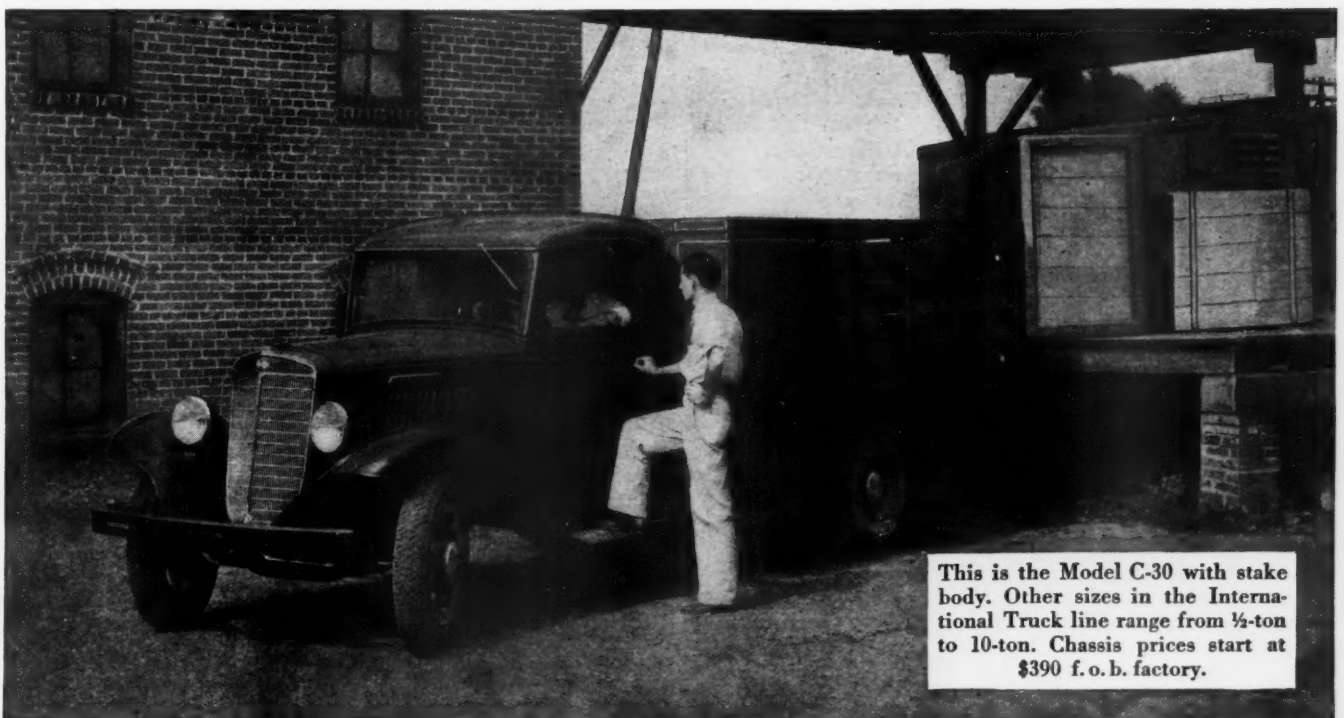


INTERNATIONAL TRUCKS

LOWEST-PRICED 1½-ton 6-cylinder TRUCK IN INTERNATIONAL HISTORY

● International Harvester now offers by all odds the best value in this popular field, considering beauty of design, high standards of quality throughout, and operating economy. A 78.5 h. p. engine and sturdy ALL-TRUCK construction in a truck of ultra-modern style. Inquire of one of our 217 Company-owned branches or of any International Truck dealer. See the new Model C-30 and others of the new streamlined Internationals now on display everywhere. Better still, try one out on your own job.

INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. **OF AMERICA** Chicago, Illinois
(INCORPORATED)



This is the Model C-30 with stake body. Other sizes in the International Truck line range from ½-ton to 10-ton. Chassis prices start at \$390 f. o. b. factory.

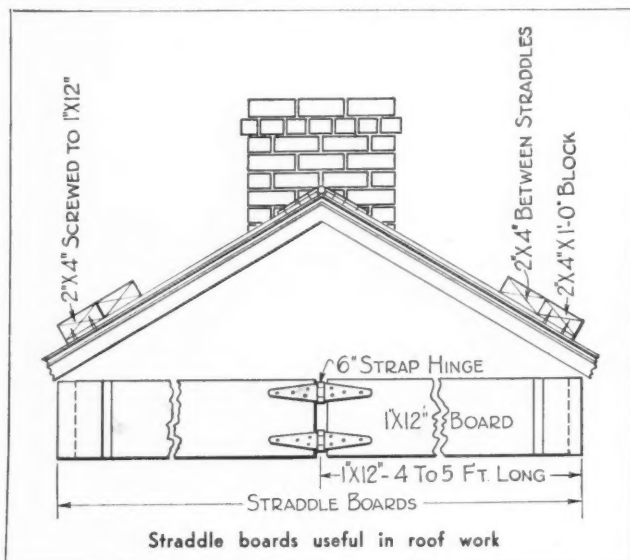
Straddle Boards

I SUBMIT herewith sketch of a simple but very useful scaffolding arrangement which I find quite handy when working on chimney repair work, especially where the chimney is in or near the comb of the roof.

In these days of repair and recovery, there are plenty of chimneys to repoint and retop.

These straddle boards (as I call them) are placed one on either side of the chimney. I then lay a 2 x 4 (as shown) from one to the other making good footholds. Boards can be used to cover the roof up to and around the chimney, if need be, to protect the roof. Carpenter trestles also may be used straddling the comb using boards for level scaffold. In fact, there are many ways with this foundation which, if well made, is safe and secure.

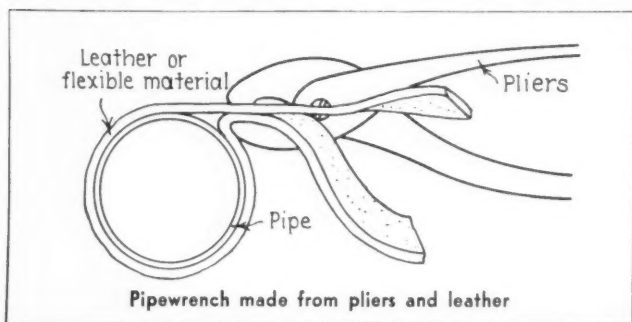
A nice feature of it is that they can be taken down, folded and taken from job to job without destruction by a lot of nailing.—A. B. MANHERZ, Builder, Oakmont, Pa.



Pipe Wrench from Pliers

THE accompanying sketch shows how easy it is to make a good pipe wrench out of a leather strap and a pair of pliers. Wrap the strap around the article to be turned, as shown, and grasp both ends close to the article with the pliers. If it is desired to tighten the thread turn clockwise as in the sketch. If the thread is to be loosened, simply pull the other way just as with any regular wrench. This idea is of especial value where the article is nicked or polished and must not be scratched as the leather forms a cushion between the pliers and the metal. If it is thought that a single thickness of leather will not be strong enough, it is a simple matter to use two thicknesses or more. Thus the method really has no size limit, provided one has a strap that is long enough. What is more, the strap needn't be leather. Any strong, flexible material will do, even rope.

To be sure, for actual pipe work a regular pipe wrench is better, because pipe wrenches are made specially for the purpose, and one can more easily develop a powerful twisting action through the handle of a regular wrench. Nevertheless, it is well to know about this kink, as we often find ourselves



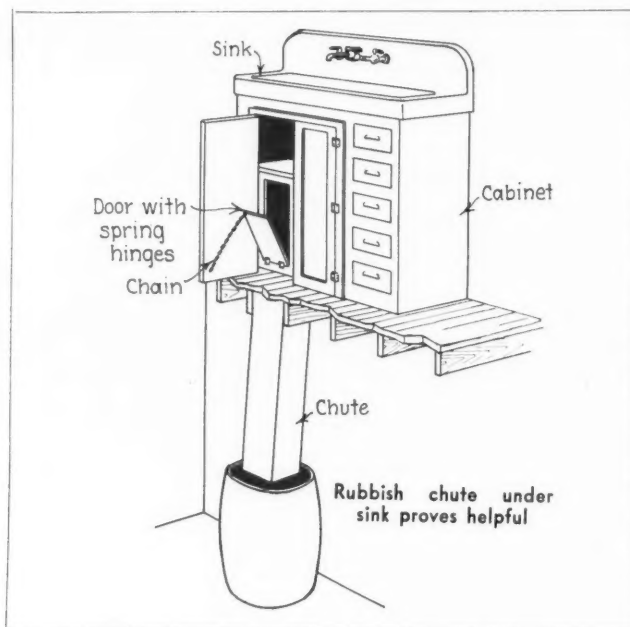
confronted with a job that we think needs a pipe wrench, whereas with a pair of pliers and an ordinary strap the obstacle is easily overcome.—W. F. SCHAPHORST, Newark, N.J.

* * *

Built-In Rubbish Chute

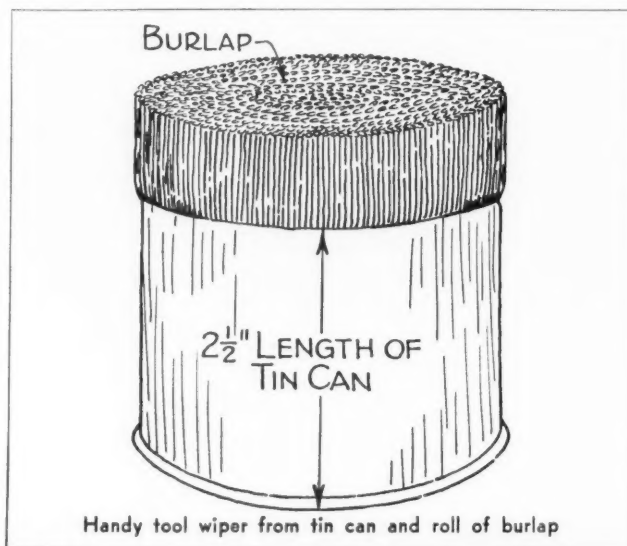
THE enclosed sketch shows a method I have used successfully in homes both new and remodeled. It is a handy means of disposing of cans, papers, and the rubbish that daily collects about the home.

The cupboard door opens, giving the housewife access to a shelf convenient for soaps, cooking utensils, etc. String attached to inner door opens it so that rubbish is easily disposed of. Spring hinges on the inner door make it automatically close when outer door is closed. This idea is somewhat similar to a laundry chute and may not be new, but I have never seen anything like it before myself.—CURTIS H. YOUNG, Taunton, Mass.



Tool Wiper

TAKE a small tin can and cut it to about two inches deep. Then cut some burlap into strips two and a quarter inches wide and roll them tightly until the roll is a little greater in diameter than the inside of the can. Force this roll into the can and push it to the bottom. Ravel out the threads of burlap that run around the roll until they come down to the top of the can. Soak the burlap with oil, and the wiper is completed. This is especially fine for saws and plane bottoms.—U. L. HIATT, La Junta, Colo.



Carrara Walls have been used to good effect in this modern bathroom. Permanent, practical and easy to clean, Carrara adds beauty and personality to any room in which it is used. The color scheme here was Gray Carrara for the walls, Black Carrara for cap and base trim.

Let
CARRARA
WALLS HELP
YOU TO
ADVERTISE



your bathroom remodeling work

WHEN you modernize an old-fashioned bathroom with beautiful walls of Carrara Structural Glass, you are really laying the foundation for many future remodeling jobs. For every bathroom or kitchen renovated with Carrara is a constant advertisement of your quality work. Friends of your original client see the remodeled room, are impressed by its unusual beauty, permanence and practical qualities, and probably will be calling you shortly to figure on modernizing *their* bathroom or kitchen.

Carrara bathroom or kitchen walls inspire enthusiasm in everyone who sees them. Soft, mellow color-tones and brilliant, polished surfaces give them loveliness. Carrara's adaptability to decoration such as sand-blasted designs, fluting and shading make many kinds of wall treatment possible. Carrara Walls can be kept clean by merely wiping them with a damp cloth occasionally. They are

permanent, never fading with age, never checking, crazing, staining or absorbing odors. And the ease with which they can be installed will appeal to you . . . you can usually apply Carrara, on remodeling jobs, right over the old walls of bathroom or kitchen.

You'll want to know all about Carrara . . . because it will help you to cash in on remodeling jobs created by the National Housing Act. So send for our new book "Personality Bathrooms and Character Kitchens." It contains complete information and many interesting installation pictures.

A PRODUCT OF

**PITTSBURGH
PLATE GLASS COMPANY**

2325 Grant Bldg., • Pittsburgh, Pa.

CARRARA
The modern structural glass



**Automatic Block
Signals
Smooth Roadbed
Experienced
Crews
Careful Handling**



A SERVICE INSTITUTION

AMERICAN STEEL SHEETS

FOR ALL KNOWN USES



KEYSTONE Copper Steel Sheets

Excel in the Building Field

Use sheets of recognized reputation and value. For roofing, siding, gutters, spouting, air conditioning systems, and general sheet metal work—Keystone Copper Steel gives maximum rust resistance.

Insist upon AMERICAN Black Sheets, Keystone Rust Resisting Copper Steel Sheets, Apollo Best Bloom Galvanized Sheets, Galvannealed Sheets, Heavy-Coated Galvanized Sheets, Formed Roofing and Siding Products, Terne Plates, etc. Write for information.

This Company also manufactures U.S.S. STAINLESS and Heat Resisting Steel Sheets and Light Plates for all uses to which these products are adapted.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

NEWS OF THE MONTH

Building Activities

An "Irresistible Program"

THE construction industry at its recent meeting in Knoxville, Tenn., from December 5 to 8, determined to take a position of leadership in the recovery program, fixed its course, cleared its decks of internal problems, trimmed its sails and ordered full speed ahead.

An "irresistible program" of recovery leadership was set as the goal of the industry.

This meeting, initially scheduled as a regular session of the Construction Code Authority, was the occasion as well for a meeting of the Divisional Code Authority for General Contractors and the Construction League of the United States.

Construction League's Aggressive Program

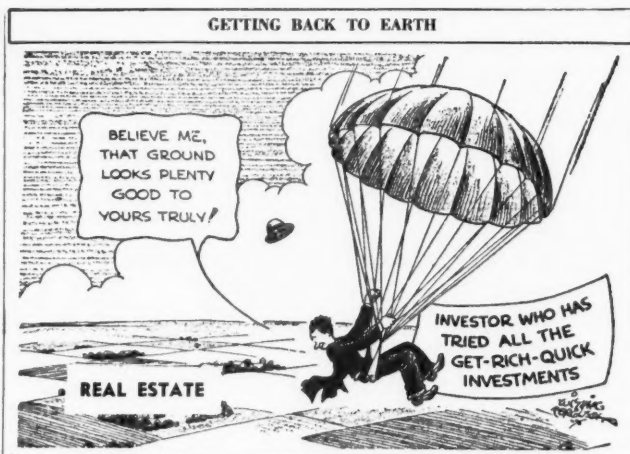
Revival of private construction and limiting of the public construction program as quickly as possible was advocated by James A. Moffett, Federal Housing Administrator, who told nearly 300 national and local construction leaders at the dinner meeting on Dec. 6 that he had been authorized by the President to say that the public works program, in the field covered by the National Housing Act, would not compete with private enterprise.

The problem of his agency, Moffett stated, is to stimulate construction in ways that will at no time have a depressing or slowing-up effect on building or any other kind of work. Modernization was decided upon by the Federal Housing Administration to be the quickest safe and sane way of giving immediate employment to construction workers, but the greater opportunity for the construction industry lies in Titles II and III of the Housing Act under which millions of homes urgently needed by the American people may be built, he said.

Open Sessions of Code Authority

One of the greatest code enforcement hurdles in the South is the 40 cents per hour minimum wage rate for common labor, it was claimed by representatives of southern contractors who were present and who introduced a resolution calling for the reduction of this minimum rate from 40 cents to 30 cents per hour for the Southern states. This resolution was referred to the National Construction Planning and Adjustment Board which has requested the southern contractors to appoint representatives to meet with the employee members of the Board in an effort to arrive at a solution of the problem.

Speaking at a meeting sponsored by the Construction League, Arthur D. Whiteside, member of the National Industrial Recovery Board, further revived the courage of code adminis-



The true basis of prosperity; a piece of land and a home of your own.

"MORE GLASS"



**THAT IS ONE OF THE BEST ARGUMENTS YOU CAN
USE IN SOLICITING NEW BUSINESS UNDER THE FHA**

● The infinite possibilities that lie in glass as a modernizing material give contractors who emphasize them an undisputed advantage in the race for business over those who neglect to stress this important factor. The charm and cheer which glass alone can bring to the modernized house are apparent to every home-owner. To talk about a sun porch, corner windows, dormers or any one of the scores of uses of glass in the home is vastly more interesting to your prospect than to discuss other fundamental features of modernization that are so much less inspiring. Yet, sell the glass part and you sell the whole job. That is why so many contractors who are operating successfully under the spur of the FHA make glass the spearhead of their attack. If you go just a step further and play up the fact that you use L·O·F Quality Glass, you will find the job of selling even more simple, for consistent national advertising has made the name of Libbey·Owens·Ford as well known to the public as it is to the trade. Libbey·Owens·Ford Glass Company, Toledo, Ohio.

LIBBEY·OWENS·FORD
 **QUALITY GLASS**



Perfection

BRAND OAK FLOORS

In old homes or new, whether for renting or selling, "PERFECTION" BRAND Oak Floors give service and satisfaction. The greatest value for the money.

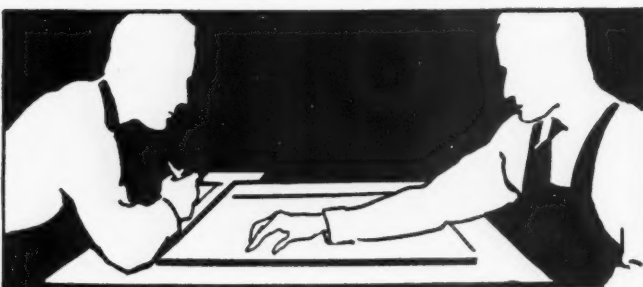
Take advantage of the new Housing Administration Act and sell good Oak Floors on your modernizing jobs.

"PERFECTION" BRAND Oak Flooring as furnished by your local dealer is carefully manufactured from selected timber, scientifically seasoned and kiln dried, easily finished. Ask your dealer today to show you the "PERFECTION" BRAND.

Complete information is yours for the asking. Write us today. Sold only through retail lumber dealers.



ARKANSAS OAK FLOORING CO.
PINE BLUFF ARKANSAS



**"I want the pipe to last
as long as the building."**

**"Then you need Reading
Genuine Puddled
Wrought Iron Pipe."**

For advice on your pipe problems, write

READING IRON COMPANY
PHILADELPHIA

SCIENCE AND INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON



Your HOME REPAIR DOLLAR

accomplishes more now.

WHAT about that breakfast nook you've always wanted? And those sagging doors—and the extra closet for Betty's room? The Federal Housing Plan has made this possible.

Let Us Make An Estimate

One of the clever pieces of copy being used by builders to advertise their services.

trative officials when he said that within 30 days a new era of code enforcement and compliance would be apparent. He directed leaders, however, to give serious consideration to those portions of their codes which might be unenforceable.

"The construction industry has at present the opportunity to perform a service for the general welfare of this country such as no industry has had for many years," Whiteside declared. Calling upon the industry to advertise its wares, he said, "You are the logical group which has an unprecedented opportunity to carry out the greatest sales and promotional campaign ever presented to any division of industry.

"You have before you those reasons for the sale of your product and services which are absolutely unanswerable and carry the most effective appeal to men and women alike. They are: obsolescence which exists in every phase of building and construction; an appeal to the finest instinct in human nature—the ownership of the home or the permanency or the stability of the business; and you engender a sense of responsibility because you create the consciousness of providing for those for whom provision must be made and for whom it is natural instinct for every man to provide, that is for the family or for those closely associated with him in business.

"You can present an irresistible program of advantages to the home and the industry builder for you appeal to the common sense and intelligence of every man and woman in this country when you use slogans like 'Build for Permanent Security,' 'Build for Re-employment,' or 'Invest in Reality.'"

Manufacturers Propose Joint Conference

M. J. Beirn, vice president of the American Radiator Corporation and representative of the manufacturing and equipment branches of the industry, proposed the establishment of an intro-industry committee of manufacturers and contractors representatives to confer on a program of mutual interest and advantage and on problems of the industry.

Accomplishments of Code Authority

Important decisions on local administration of the Construction Code were arrived at during the executive session of the Construction Code Authority on Dec. 7. A program for the establishment and operation of local code councils was accepted in principle by the Code Authority which requested the Executive Committee to develop the plan for reference to localities interested in co-ordinating and consolidating local administrative activities.

Rules and regulations for the establishment and operation of official joint bid depositories were adopted. The plan is

applicable to any locality where several divisional groups have established independent bid depositories. It is proposed that the depositories would be supervised by a joint committee of the several divisions participating and that the filing fees for the bids would support the operation. The Executive Committee was authorized to place this program in operation as expeditiously as possible.

Consideration of ways in which Article VII of Chapter I, controlling competitive bidding practices, might be improved and strengthened was a subject assigned to a committee by the Code Authority which had previously authorized the collection of material on this subject. The Committee is to make its recommendations, which may be in the form of amendments to Chapter I, at the next meeting of the Code Authority.

A special committee was empowered to deal with the controversy between the Divisional Code Authority for General Contractors and the Divisional Code Authority for Mason Contractors, and NRA has been requested to defer its decisions on the proposed change in the Mason Contractors' definition and on applications pending for termination of the exemption granted by Administrative Order X-36-1 until the committee has reviewed the facts and reached a decision.

P. & A. Board Area Agreements

Among the recommendations made to the Code Authority by the Planning and Adjustment Board was one for modifying Chapter I of the Code so as to permit several divisions of the industry by mutual agreement to effectuate a combined area agreement. The more rapid stabilization of labor rates in the construction industry was seen as one of the advantages of this proposed move as well as allowing area agreements to be made in sections of the country which do not have specialized contracting so distinctly organized as do the larger metropolitan sections. For instance, it was pointed out, in a Southern state where special contracting is less intensely developed, the general contractors and employee groups have proposed a single area agreement covering all trades which is impossible under the present Code provisions, but which is said to be the most practical solution in that territory.

The P. and A. Board also recommended the consideration by the various divisions of the disadvantage of the contractual "definitions" of nine of the chapters of the Code, particularly to the limiting thereby of the application of mutual or area agreements for stabilizing labor rates in localities. The fact

REPAIR AND MODERNIZE



Your **HOME**

**Three Years to
Pay Under
F. H. A. Loan Plan**

MANY Homes in Meriden need repairs and remodeling... and now is the time to have the work done. The F. H. A. system provides a means for home owners to obtain loans for this purpose on a most liberal basis.

**These Meriden Contractors Are Ready To Serve You... And to
Furnish Information About F. H. A.**

<p>Clarence Anderson 54 GRAVELINE AVE. PHONE 4512</p> <p>Wm. Blythe 187 SO. BROAD ST. PHONE 2285</p> <p>H. B. Bloomfield 18 CHESTNUT ST. PHONE 2484</p>	<p>Fred A. Lanouette 24 LANOUETTA ST. PHONE 1828</p> <p>Charles J. Ouellet & Sons 38 CHESTNUT ST. PHONE 3505</p> <p>A. Tomassetti 235 RESERVOIR AVE. PHONE</p> <p>Fred W. Lehmann 115 HAMILTON AVE. PHONE 817</p>
--	---

How the contractors of Meriden, Conn., are creating business and good will by advertising in the local newspapers.



Assure Correct Operation and Circulated Heat

HERE is the way to make your fireplaces efficient, modern heating units as well as the decorative features of the homes you build. Build them around the Heatilator and be sure that they will always work.

This improved method of construction actually makes your fireplaces easier to build. The Heatilator is a correctly designed metal form around which the masonry is laid. Complete from floor to flue, it replaces firebrick, damper and other materials. Yet it does not limit the design of your fireplace or the type of masonry you wish to use.

Owners everywhere are asking for Heatilators in their new homes and camps. They like its trouble-free, smokeless operation. They like the way it circulates heat to every corner of the room and to adjoining rooms—cutting fuel costs during cool spring and fall weather. In their southern homes or summer camps, they find it the only source of warmth required.

Send the coupon for complete Heatilator details now—facts that will prove valuable to you on every job, new or remodeling, that includes a fireplace.

Heatilator Fireplace

HEATILATOR COMPANY

911 E. Brighton Avenue, Syracuse, New York

Please send complete Heatilator information.

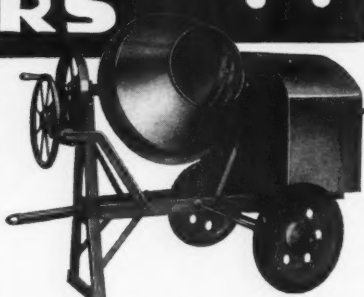
Name.....

Company.....

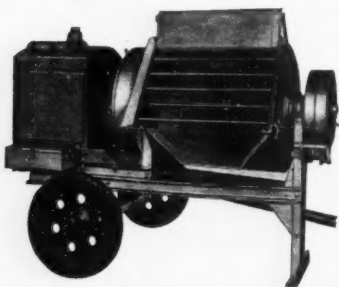
Address.....

KWIK-MIX MIXERS

Full anti-friction bearing. Light weight. Skip shaker. Automatic water tank. Spring mounting. Sizes: 3½-S, 5-S, 7-S, 10-S.



3½-S Trailer — Roller Bearing — Spring Mounting.



Plaster and Mortar Mixers Trailer and 4 Wheel Type.

DEALERS! ATTENTION!

Desirable territories are available to progressive Lumber and Materials Distributors

Kwik-Mix

Write for Catalog AB

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

time-saver!
space-saver!
power-saver!
**MONEY
MAKER**



This remarkable machine cuts costs as quickly and as surely as it cuts wood! Does the work of five ordinary machines—eighteen different every-day jobs—faster and at less cost! Cross-cut saw, rip saw, jointer, shaper and router—five machines in one . . . at the cost of one. Ball-bearing throughout. Write for full particulars.

AMERICAN SAW MILL MACHINERY CO.

61 Main Street

Hackettstown, N. J.

THE 20th CENTURY WOODWORKER

was emphasized that the basic Code and nine of the divisional chapters contain a functional definition which embraces all operations in the classes of work defined, by whomever performed, whereas nine other divisional chapters are limited to work of the type defined "contracted for" or performed "for profit" or "for hire."

* * *

G E Home Competition

TO CO-OPERATE with the Federal Housing Administration and stimulate interest in small home building, Gerard Swope, president of the General Electric Company, announced Dec. 16 that his company will sponsor a national competition beginning Jan. 1, 1935, for designs of small homes that will provide the utmost in modern convenience and livability.

A total of 54 prizes, aggregating \$21,000, will be offered to architects and designers. It will be possible for one person to win awards amounting to \$5,000. Demonstration homes will later be constructed in various parts of the country.

"This competition will enable the public to get a new vision of what an inexpensive home can be like in this new era of our national development," Mr. Swope said.

* * *

Tune In on FHA

A NATIONAL radio broadcast schedule has been put into effect by the Federal Housing Administration which is of interest to all building industry men. It is as follows:

Wednesdays at 12:45 P.M., E.S.T., Columbia Network. Subject: "Your Home and Mine." The flying microphone taken into the homes of representative Americans who tell true, spontaneous stories of how they have modernized. Each broadcast from a different section of the United States. Miss Martha Holmes, Better Housing Reporter, in charge of all broadcasts.

Wednesdays at 9:45 P.M., E.S.T., American Network—A series of special interest to women—with a famous and distinguished woman celebrity as guest speaker in each broadcast.

Saturdays at 6:45 P.M., E.S.T., NBC Blue Network—"The Master Builder" broadcasts each week about home and housing problems, interviewing and being interviewed in a unique manner.

Criticisms, comments and suggestions are solicited by FHA. Write Radio Division, Federal Housing Administration, Washington, D.C.

* * *

Insulite Promotions

SALES headquarters in Chicago for all territory east and south of the Rocky Mountains have been recently established by The Insulite Company. At the same time the promotion of several Insulite officers who will hereafter make their headquarters in that city were announced as follows:

E. W. Morrill, formerly sales manager, has been promoted to the position of assistant vice-president with headquarters in Minneapolis.

M. G. Jensen formerly Eastern district manager has been promoted to the position of sales manager in charge of Eastern, Southern, Central and Western dealer sales districts, as well as industrial and cold storage sales with headquarters in Chicago.

S. J. O'Connor has been promoted to the position of assistant sales manager.

Joe Sanders Jr., has been placed in charge of sales promotion and publicity, with headquarters in Chicago, and will be available for constant promotion.



M. G. Jensen of the Insulite Co. who has been appointed sales manager of important areas.

tional and sales assistance in the field. The Advertising Department will be headed by H. H. Strobusch at Minneapolis.

* * *

L. R. Putman on Leave to Assist FHA

L. R. PUTMAN, Vice-President and Marketing Editor of the AMERICAN BUILDER, has been appointed Associate Director FHA for northern Illinois, in charge of modernization activities under Title I of the National Housing Act. His office for this work is at 134 North La Salle Street, Chicago. Mr. Putman will continue his active supervision of the AMERICAN BUILDER Dealer Market work and will return to full time service for AMERICAN BUILDER and its readers at an early date.

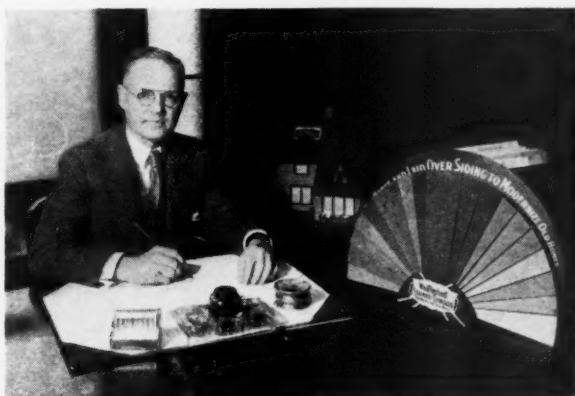
The Chicago territory including the eighteen northern counties of Illinois, is considered one of the most important, yet difficult to organize for effective modernization campaigns, of any in the entire country. This fact made it essential for the housing administration to put in charge of this district a man of known force and ability in organization and merchandising work. Mr. Putman's long and varied experience as promotion manager of the Southern Pine Association and as Dealer Marketing Editor of the AMERICAN BUILDER makes him the logical man for this appointment. Associated with him in this work are Percy Wilson, Regional Director for four states, and Carroll H. Sudler, Director for Northern Illinois on Title II, new construction.

* * *

Gosch Heads Weatherbest

INTERESTS associated with H. E. Gosch, pioneer stained shingle manufacturer and former president of the Creo-Dipt Companies, have purchased the Weatherbest Stained Shingle Company, hereafter to be known as Weatherbest Corporation. H. E. Gosch is president; Phillip Rohrbacher, chairman of the Board; Wm. M. Ritter, vice president and treasurer; E. M. Higley, vice president; Wm. Levy, secretary; Paul I. Cohen, director and attorney for the company.

The Weatherbest Corporation will continue its distribution through the retail lumber dealer.



H. E. Gosch

Ardrey to Address Realtors

J. HOWARD ARDREY, of the Federal Housing Administration, Deputy Administrator for Title II, covering mutual mortgage insurance, will be a principal speaker at the annual business meeting of the National Association of Real Estate Boards, to be held in Houston, Texas, Jan. 21 to 25.

* * *

USG Acquires Arborite

ANNOUNCEMENT has been made at the office of the United States Gypsum Company of the purchase by that Company of the Arborite Company, manufacturers of insulating board products, with a factory at Lisbon Falls, Maine.

The Arborite line of insulating products, which includes insulating board, lath and tile, will be continued. In addition the United States Gypsum Company's brands of insulating



An average service of 30 years has been established by test for Samson Spot Cord.

More than forty years of actual use substantiates these tests.

Samson Spot Cord is specified by architects because such specification is definite and positive—Spot Cord is made in one grade only and is identified by the trade mark, the colored spots. Substitution is easily detected and is unnecessary because Samson Spot Cord is available to contractors and builders through Hardware and Supply dealers in every section of the United States.

SAMSON CORDAGE WORKS
89 Broad St. Boston, Mass.

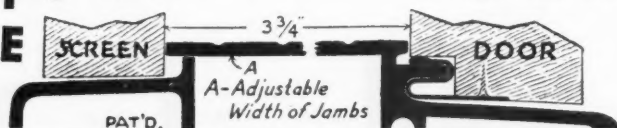


A NEW SADDLE C C U R A T E for OUTSWINGING DOORS

THESE new saddles for outward swinging doors and French windows provide weather proofing results not obtainable before. Three different designs are available. Accurate Strip equipment includes weather proof saddles of many varying designs to meet any conditions of sash or door construction. Write for complete information.



Box 111
216 East 26th St.
New York, N.Y.



It's a JAEGER



Recognized biggest value.

Fast 3 1/2 S Trailers.
Power Load Tilters 3 1/2,
7, 10S. Non-Tilts 7S
to 56S sizes.

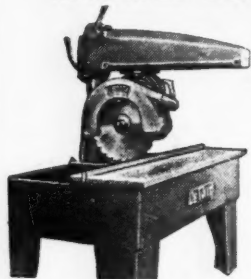


GET OUR
LOW PRICES

THE JAEGER MACHINE COMPANY
521 Dublin Avenue, Columbus, Ohio

DEWALT

MACHINES CUT WOOD—METAL—STONE

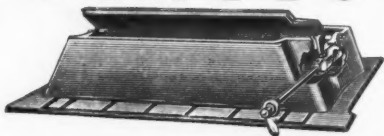


Machines for Single Purpose
Operations or Variety Uses
up to 29 Distinct Operations
Sizes from 3/4 to 15 H.P.

Write for full information

DE WALT Products Corp.
244 Fountain Ave., Lancaster Pa.

PEERLESS



DOMES DAMPERS

When modernizing or building a new home, include a fireplace in your plans. Be sure of perfect operation by installing the Peerless Dome Dampers. Built of heavy stove plate cast iron they will last a lifetime. Three models to choose from. Rotary control—Poker control—Chain control. All standard sizes. WRITE TODAY FOR PRICES AND DESCRIPTIVE LITERATURE.

**OTHER
PEERLESS
PRODUCTS**
Fireplace Fixtures
—Ash Dumps—Coal
Windows—Ash Pit
Doors—Garbage
Receivers and
Hearth Fire Gas
Heaters.

PEERLESS MANUFACTURING CORP.
1400 W. Ormsby Ave. Louisville, Ky.

board products, Red Top and Weatherwood, will be furnished from Lisbon Falls.

* * *

Sees Good 1935 Business

ALL signs point to a substantial revival in the heavy industries in 1935, according to the year-end statement of Albert C. Lehman, president of the Blaw, Knox Company, Pittsburgh. More than five billion dollars worth of industrial machinery and power plant equipment must be bought to make good deferred maintenance, he pointed out. "We need 400,000 new homes a year costing approximately \$2,000,000,000 to keep up with obsolescence and increases in population and in addition we need 2,000,000 additional homes to accommodate families now living "doubled up," he says. His estimates are based on the recent report of the Durable Goods Industries committee.

* * *

2 Billion in Home Loans

LOANS by the Home Owners' Loan Corporation have passed the \$2,000,000,000 mark, it was shown in the weekly report of the Corporation Dec. 10 which revealed a total of \$2,021,736,619 in cash and bond advances granted to home owners up to Nov. 29.

This amount covers mortgage refinancing loans of 663,863 individual urban homes, plus 6,560 smaller cash loans to take up past due taxes and finance necessary repairs on unmortgaged homes, or an aggregate which represents one out of every fifteen owner-occupied urban homes in the United States. During the week ending Nov. 29, field offices of the Corporation closed 10,866 loans to a total of \$34,047,760. The average amount of all loans to date is \$3,016.

**GET
FREE
ESTIMATES
AND
DESIGNS**

**ON THAT SORELY NEEDED REPAIRING
AND MODERNIZING . . .**

Now Made Possible Through Federal Home Financing

AND NO JOB TOO LARGE OR TOO SMALL

New Porches	Kitchen Cabinets	Plumbing	Cement Work
Porch Enclosures	Insulating	Electrical Work	Brick Fronts and
Dormers	Residing	Painting	Brick Veneering
New Attic Rooms	Brick Siding	Weather Stripping	Chimney Repairing
and Bath	Asbestos Siding	House Raising	Store Fronts
New Floors	Plastered Arches	and Moving	New Garages
New Windows & Doors	Nothing in 1st		
	Two Months	2 to 3 Years to Pay	

NOTHING DOWN

It Will Pay You to Inquire About Our Low Prices

SCHILLMOELLER & KROFL CO. INC.
3959 Lincoln Ave. Open Sunday 10-5
Washington 3300, Independence 3259. ALL WORK FULLY GUARANTEED

A timely advertisement by a firm of Chicago builders.

In the interest of home owners who already have received loans from the Corporation, the directors point out that requests for repair and modernization advances are being acted upon, despite the fact that no further new applications for loans are to be accepted. To date upward of \$35,000,000 in cash has been disbursed by the Corporation through its reconditioning division for the repair, remodeling and modernization of homes taken by the Corporation as mortgage security, resulting in increased employment in the building trades throughout the country.

Additional reconditioning work approximating \$27,500,000 is represented by some 110,000 of the 290,000 refinancing applications still pending in the legal offices, which are not affected by the recent suspension of activities on new applications. The average reconditioning job financed through Corporation loans amounts to approximately \$250.

FHA House Standards

(Continued from page 21)

Administration before they will be approved for use in buildings constructed under this program.

Floor construction resting directly on the ground shall be of concrete or masonry so constructed as to prevent the entrance of ground water through such floor. Adequate drainage shall be provided for basement floor.

A well-ventilated space, beneath all joists, beams, and girders is required where no basement is provided and wood or metal construction is used.

Where no basement is provided, a well-ventilated space, not less than two feet in the clear, shall be provided, beneath all joists, beams and girders, where either wood or metal construction is used. The Administration is especially insistent upon this requirement because of the great danger of rot and rust occurring in such spaces when poorly aired.

Flashing or caulking shall be provided as may be necessary to prevent moisture from penetrating the building.

All exterior metal work, which is subject to corrosion, shall be adequately protected by rust inhibiting paint or otherwise.

In a country possessing a wide range of climate, a great degree of variation in characteristic topographical features, and differences in local customs of building and of living, considerable freedom must be allowed for the adaptation of standards to local conditions.

The Federal Housing Administration recognizes these local variations and intends that all standards established or recommendations made be interpreted in the light of local conditions, needs and customs.

The Add-A-Room House

(Continued from page 26)

note that the very first room, Room "1", is available now as a Maid's room, if such is desirable. Or it would make a fine Breakfast Room, Card Room, Sewing Room, Office, or a spare room of innumerable uses.

As I have said, the impossible has been accomplished. At every stage of its development, the ADD-A-ROOM house, as here clearly portrayed, is a complete well-planned house. Moreover, its progressive development takes place with practically no "tearing out" of previous work, and at virtually no inconvenience to the dwellers therein. Again, the plans are such that this house lends itself to any style of architectural treatment you desire . . . from that of the "homey" cottage to that of the slab-sided flat-roofed "moderne."

Drawing 5, herewith, suggests the simplest architectural treatment of the exterior . . . just a homey hipped roof, all around, pulled down here and there where opportunity and head-room permit. Incidentally, this is the best possible treatment when subsequent additions are kept in mind. A hip roof will fit any plan whatsoever, hence can be added to *ad infinitum*!

Drawing 6 is a glimpse of the completed 6-room or 7-room house from the living room garden or patio.

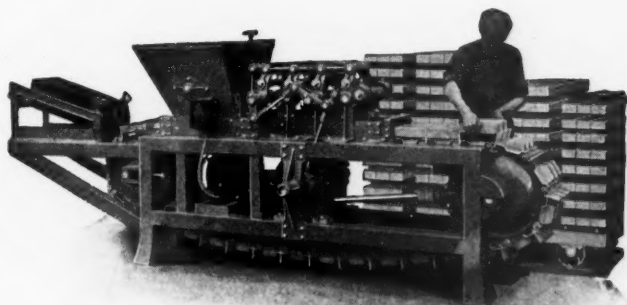
At Drawing 7, I have sliced the initial 3-room house vertically in half, thus exposing its interior "works." This drawing, studied along with the initial plan shown as Drawing 1, will surely yield a clear conception of the genesis of the ADD-A-ROOM house and its workable arrangement.

Drawings 8 and 9 are practically the "working drawings" of the hipped roof treatment of the 3-room nucleus and of its projected ultimate development. These will give any builder an absolutely clear idea of this particular roof treatment at any stage of the development. These drawings, as well as all floor plans herein shown, are drawn to "scale"; this scale being shown graphically on each layout.



BAYER-BRICE SHOW THE WAY IN FLINT, MICH.

Their \$2000 type of home has set a new high standard of value in permanent, modern home building. They have actually proven that a 6-room FACE DUNBRIK house can be built for less than the cost of frame. No other building operation has created such a wide interest among the home buyers of Flint nor such an amazing revelation to the building trade.



Similar cost smashing records are being made by DUNBRIK Manufacturers in S. Car., Kans., La., Mont., R. I., S. Dak., and Mich. All are getting a major share of the business in their territories because they offer a superior product, while DUNBRIK Processes and Automatic Line Production cut building costs at every step. They successfully demonstrate two-way results—lower costs and profitable operations.

620,000 American families are going to demand DUNBRIK beauty, permanence, fire-safety and low cost for the new homes they will build in 1935. No other unit will so completely meet this demand or so fully comply with the favored qualifications for a 20 Year Guaranteed Mortgage Loan as DUNBRIK.

Here is a new and proven opportunity for you if you want to ride the crest of America's Greatest Building Program. Send for "4 KEYS TO SUCCESS," and let us show you how you too can lower building costs and own an exclusive manufacturing business in your city.

W. E. Dunn Mfg. Co., 450 W. 24th St., Holland, Mich.

Newspaper Building Exhibit of Building Materials Helps Stimulate Sales!

The Hartford Times Opens
Home Building Institute
In Its Main Building

THIS Institute is a permanent exhibit of a great many kinds of building materials including brick, tile, slate, fire-place units, wall-board, tile-board, roofing materials, lumber, insulation, floor covering, oil burners, casement windows, paints, wallpapers, etc. The Saturday issue of this paper is used each week to promote interest.

The Institute rooms are open for meetings in the evenings without charge. Cooking demonstrations are being arranged for calling for the use of the electric kitchen which is in the Institute. Organizations are constantly using the facilities thus bringing all of the products displayed to the attention of the visitors.

Builders are bringing in their prospects not only from the Hartford area but from all over the State.

Hartford is talking about this exhibit which has become the center of information. All sorts of questions are asked and the proper answer found even if it is necessary to wire 1,000 miles away for the answer.

Manufacturers could well afford to give their dealers who are represented in the exhibit substantial support with their advertising in this newspaper. We urge that you make a study of the possibilities offered and have a representative call and bring you a full report. Your dealers are very much interested and we feel that we speak for them in asking for your support.

THE HARTFORD TIMES

Hartford, Connecticut

Represented by

J. P. McKinney & Son

New York

Chicago

San Francisco

LETTERS from readers on all subjects

Facts, opinions and advice welcomed here

"The Spirit of Home"—

Kearney, Nebr.

To the Editor:

I greatly enjoyed the December issue of American Builder and Building Age.

I found it so full of inspiration, in fact, that I hung a "busy" sign on the door and went through the copy from cover to cover.

Of particular interest to me are the two small houses by Randolph Evans, Architect. There is something more—a great deal more—than sound physical construction expressed in these two little houses.

The spirit of home is in them. The desire is aroused to LIVE IN such a cottage. They seem to hold forth the promise of peace, comfort and contentment, and you seem not to question the fulfillment of the promise.

HUGH M. MCCLURE, *Architect*

Organization in Essex County

East Orange, N. J.

To the Editor:

This Association has been organized by the building contractors for the suburban area of Essex County in order that the special interests of contractors dealing generally with residential construction may work more closely together.

We have a membership of one hundred and fifty contractors which represents about seventy per cent of the group in this area. The municipalities of Orange, East Orange, West Orange, South Orange, Maplewood, Millburn, Bloomfield, Glen Ridge, Montclair, Verona, the Caldwelles, Roseland, Livingston, Essex Fells, Cedar Grove and Irvington are included in this territory.

BUILDING CONTRACTORS AND HOME BUILDERS
OF WESTERN SUBURBAN ESSEX

by A. EDMUND WILLIAMSON, Secy.

Prospects Good in Michigan

Kalamazoo, Mich.

To the Editor:

Thank you for the extra copies of the American Builder; also wish to say I thought the article showed up very nicely in your magazine.

In answer to your inquiry as to prospects for building in 1935, wish to state we have had more inquiries for building sites in the last two months than we have had in the three years previous and I feel when the FHA starts functioning in Kalamazoo, home building will get off to a good start. The only money available here is at one of our local banks who demand 7 per cent interest and only 40 per cent of today's appraised value, which makes it hard for the average person to borrow.

HARRY A. HURNI,
Builder, Developer, Realtor.

FHA Loans

Sioux City, Iowa.

To the Editor:

Reference is made to an article on page 12 of November issue of American Builder, with the heading "Mortgage Money for New Homes Now Ready under FHA" by Bernard L. Johnson. I desire to know, if possible, whether or not the mortgage money referred to is now available here in Sioux City and if so, how to proceed in order to obtain a loan for a new home. It is thought that your publishing company or the person that wrote the item on page 12 of November issue could supply the information I desire.

The contractor I am figuring with for the construction of a new home (when Government money is available) has loaned me several copies of the American Builder. The house plans and building suggestions in those magazines are better than any I have seen.

O. W. BOZWELL

NEW!**TECO CONNECTORS
DOUBLE STRENGTH
OF TIMBER JOINTS—
ELIMINATE HEAVY
HARDWARE**INCREASE THE STRENGTH OF YOUR ROOF TRUSSES,
SUPPORTS, BRACING, FALSEWORK, ETC.—CUT COSTS
—SAVE ON MATERIAL, LABOR, AND TIME—USE**TECO CONNECTORS.**

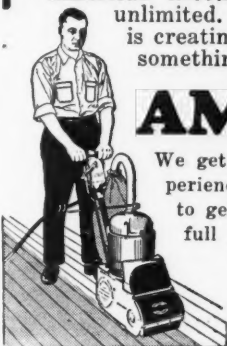
EASY TO INSTALL—WRITE

TIMBER ENGINEERING CO.1337 CONNECTICUT AVE.
WASHINGTON, D. C.**CABINET
SHOP
SPECIAL**All Ball
BearingIncludes 16" band saw,
6" jointer and 8" circular
rip and crosscut saw.Without Motor
\$247**FIVE POINTS**Parks' machines are noted
for five points of superiority:
Strength, Rigidity, Durability,
Portability, and Low Price.

Send for complete catalog

**THE PARKS WOODWORKING
MACHINE CO.**Dept. BL-1 1524 Knowlton St.,
Cincinnati, Ohio.

Good Woodworking Machines Since 1887

**MEN—MAKE MONEY!**There's lots of work for you surfacing floors by the
American Electric Method. Income is practically
unlimited. Big Government Housing program
is creating greater field than ever. Get into
something for yourself with an**AMERICAN Floor
Sander**We get you started. No large capital or ex-
perience required. If you want to know how
to get the money rolling in, write quick for
full particulars sent without obligation.**THE AMERICAN FLOOR SURFACING
MACHINE COMPANY**

511 South St. Clair St

Toledo, Ohio

**build
with
CONCRETE
for***Permanence
Safety
and
Economy*I am interested in selling and building
the farm improvements checked below.

- | | |
|---|---|
| <input type="checkbox"/> Floors | <input type="checkbox"/> Permanent Repairs |
| <input type="checkbox"/> Foundations | <input type="checkbox"/> Milk House |
| <input type="checkbox"/> Basement Walls | <input type="checkbox"/> Milk Cooling Tanks |
| <input type="checkbox"/> Paved Yards | <input type="checkbox"/> Feeding Floors |
| <input type="checkbox"/> Tanks | <input type="checkbox"/> Poultry House |
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Selected List of Manufacturers' Literature

For the Service of Builders, Contractors, Architects and Dealers

THE publications listed on these pages may be obtained without charge either by using the coupon, listing the numbers of the catalogs desired and mailing to AMERICAN BUILDER, 105 West Adams Street, Chicago, or by applying on your business stationery to the manufacturers direct, in which case kindly mention this publication. Either the titles or the numbers may be used in ordering. This list is an editorial feature for convenience of our readers.

HOME EQUIPMENT

THE PARSONS CO., 15843 Second Blvd., Detroit, Mich.

1104—**One-Unit Kitchen**—The Parsons "Pureaire" Monel Metal kitchen, a compact unit including sink, ventilating hood, shelves, gas or electric range and electric refrigerator, all in a compact unit, for apartment buildings, hotels and small homes is attractively presented in a 4-page illustrated circular.

AMERICAN ENAMELED PRODUCTS Co., Mount Pleasant, Mich.

1105—**Bathroom Accessories**—"Catalog No. 110" illustrates bathroom accessories and medicine cabinets, and special mirrors, all in a wide selection, and finished in Sno-wite enamel.

THE JOHN VAN RANGE CO., 401 Eggleston Ave., Cincinnati, Ohio

1106—**Stainless Metal Sinks**—New Catalog on custom-made stainless metal sinks for residences, including typical Van complete kitchen installation furnished for Roxy's penthouse apartment at Radio City, New York.

THE CURTIS COMPANIES SERVICE BUREAU, Clinton, Iowa

1107—**Kitchen Millwork**—"The Kitchen of Your Dreams" is a new book 8-page illustrated catalog showing Curtis kitchen unit assemblies for straight-line kitchen efficiency. Details of cases and cupboards are included.

SEDGWICK MACHINE WORKS, 150 W. 15th St., New York City

1108—**Electric Lift**—The new Sedgwick electric Roto-Waiter, a fully automatic electric dumb waiter, is presented in a new technical folder with illustrations and specifications.

FRANK ADAM ELECTRIC CO., St. Louis, Mo.

1109—**Electric Heaters**—New information regarding the Frank Adam electric "Quikheter" designed to be built into bathrooms, cozy corners, etc., is contained in a new 4-page illustrated folder.

MONARCH METAL WEATHERSTRIP Co., 6333 Etzel Ave., St. Louis, Mo.

1110—**Heat Losses**—"Simple Cure for Excessive Heating Costs" is an instructive folder showing the value of proper weatherstripping for doors and windows.

1111—**Weatherstripping Steel Windows**—The Monarch system of metal weatherstrips for steel windows is explained in a new illustrated folder.

ATHEY CO., 6035 W. 65th St., Chicago, Ill.

1112—**Cloth-Lined Metal Weatherstrips**—"Athey Weatherstrip" is a 24-page catalog giving complete details of weatherstripping practice for every type of wood and metal windows and doors. A valuable handbook for architects, draftsmen and contractors.

ALLMETAL WEATHERSTRIP Co., 231 W. Illinois St., Chicago, Ill.

1113—**Weatherstrip Opportunities**—A weatherstripper's sales kit is offered to ambitious carpenters and builders who want to push weatherstrip selling and installing as a business.

H. L. G., Co., Kalamazoo, Mich.

1114—**Water Softeners**—"Velvet Water Softeners—Price List with Specifications" is a manual of specifications and engineering data on the four models and seven sizes of these water softeners.

GIBSON ELECTRIC REFRIGERATOR CORP., Greenville, Mich.

1115—**Electric Refrigerators**—New folder, 34-B, presents illustrations and specifications of 12 refrigerators and 13 Gibson features.

GABRIEL STEEL CO., Detroit, Mich.

1116—**Home Specialties**—The Gabriel line of home specialties is presented in a 12-page catalog stressing the utility value of these products.

THE KITCHEN MAID CORP., Andrews, Ind.

1117—**Built-in Kitchen Cabinets**—"Pre-Planned Kitchens" is a folder showing model kitchens and typical units of the Kitchen Maid line, including information on "Temperprest" sink tops described as a new and better kitchen work surface.

CONTINENTAL SCREEN CO., Detroit, Mich.

1118—**Screen Doors**—48-page complete catalog showing the entire line of screen products including doors, full length screens and combination screen and storm doors.

MILLWORK AND HARDWARE

CURTIS COMPANIES SERVICE BUREAU, Clinton, Iowa

1119—**Windows**—"The Modern Window Unit" is a 16-page manual of details and photographs showing latest developments in the "Silentite Pre-Fit" window unit which includes frame, window, screen and storm sash.

KERRY & HANSON FLOORING CO., Grayling, Mich.

1120—**Maple, Beech and Birch Floorings**—"Three Native Hardwoods of Sterling Worth" is a 12-page booklet with illustrations outlining the merits of these three woods for home floors of quality.

WIER LONG LEAF LUMBER CO., Houston, Tex.

1121—**Structural Pine**—"The Story of Wier Long Leaf" is a 24-page brochure showing how Wier Long Leaf Yellow Pine is grown, cut and used. Numerous photographs add to the interest of the text.

NATIONAL MANUFACTURING CO., Sterling, Ill.

1122—**Builders' Hardware**—"Catalog 23, National Builders' Hardware," is an impressive piece of trade literature, 208 pages, fully illustrated and indexed, presenting the varied and extensive line of the National Manufacturing Co., including all standard items and several new features.

GLYNN-JOHNSON CORP., La Porte, Ind.

1123—**Invisible Hardware**—"Increase Closet Space with Invisible Hardware" is a folder showing various methods of installation of invisible latch for closet doors, panels, secret doors, etc. Detail drawings and template assure accurate, quick installation.

CONSTRUCTION MATERIALS

PITTSBURGH PLATE GLASS CO., Pittsburgh, Pa.

1124—**Store Fronts**—"Outmoded Stores Brought Up-to-date with New Pittco Store Fronts" is a new portfolio presenting photographs and details showing how to modernize and restyle old store fronts. Keen business opportunities here for enterprising contractors and builders.

JOHNS-MANVILLE, 22 E. 40th St., New York City

1125—**Roof Construction and Maintenance**—"What About Your Roofs?" is a 12-page handbook on industrial roofing problems featuring permanent, bonded asbestos roofs and insulated roofs to prevent condensation and roof drip.

UNITED STATES GYPSUM CO., 300 W. Adams St., Chicago, Ill.

1126—**Sound Resisting Construction**—"Red Top Metal Lath Resilient System" describes a new system of floating ceiling and wall construction for all types

of new and existing buildings to prevent noise and vibration transfer. Construction details and complete specifications presented.

H. H. ROBERTSON Co., Grant Bldg., Pittsburgh, Pa.

1127—**Copper Covered Sheet**—"Copper Covered Robertson Protected Metal" is a new 4-page detail showing the architectural uses of Robertson Protected Metal covered with Anaconda Electro-Sheet Copper.

KAWNEER Co., Niles, Mich.

1128—**Rustless Windows**—"Better Windows," a 24-page two-color lithographed catalog presenting the Kawneer line of metal windows of non-ferrous construction, including aluminum, brass and nickel silver. The new double-hung and casement windows for homes; also windows for railway, bus and steamship use.

SHEET METAL

ALUMINUM Co. OF AMERICA, Pittsburgh, Pa.

1130—**Aluminum Products**—"Aluminum News-Letter" for November carries an interesting story about the aluminum cap atop the Washington monument set fifty years ago, and when inspected recently, found good for another half-century.

REPUBLIC STEEL CORP., Youngstown, Ohio

1131—**Sheet Iron**—A "Sheet Iron Primer" is a pocket size book of 64 pages crammed full of good information regarding the manufacture of sheet iron, and the problems of rust protection. Steel alloys, and especially stainless steel, are described, and results of many tests recorded. Questions and answers regarding Toncan Iron, glossary of terms and sheet steel gauge tables complete this "primer" of fundamental information for metal specifiers and users.

AMERICAN NICKELOID Co., Peru, Ill.

1132—**Chromium**—Chromium sheets for decorative, display and sign work are featured in a beautiful 24-page brochure illustrating extremely modernistic features of exterior and interior architecture.

WALL TILE

TYLAC Co., Monticello, Ill.

1133—**Sheet Tiling**—"Somewhere You Can Use Tylac" is an interesting little folder suggesting uses for this economical tiling in kitchens, bathrooms, lunch rooms, professional offices, and stores and shops.

UNITED STATES GYPSUM Co., 300 W. Adams St., Chicago, Ill.

1134—**Acoustical Tile**—"Quietile" is presented in a 6-page illustrated folder with color card showing five attractive stock shades for this sound-absorbing tile unit which adds attractive decoration. Quietile is being specified for offices, restaurants and other interiors needing greater quiet.

YANKEE FIBER TILE MFG. Co., 51 Selden Ave., Detroit, Mich.

1135—**Sheet Tiling**—A 26-page catalog showing photographs of this material

used in bathrooms, kitchens, chain stores, meat and food markets.

PAINTING AND WATERPROOFING

ALABASTINE Co., Grand Rapids, Mich.

1136—**Stucco Paint**—"Color-it" color card in direction booklet tells how to color and refinish old stucco and cement plaster in order to restore thousands of old stucco houses.

STONHARD Co., 401 N. Broad St., Philadelphia, Pa.

1137—**Masonry Waterproofing**—"Stonhide," a material to be brushed or sprayed in liquid form over masonry surfaces to prevent moisture penetration is described in a new catalog.

HEATING AND AIR CONDITIONING

THE EDWARDS MANUFACTURING Co., Cincinnati, Ohio

1138—**Winter Air Conditioning**—"Edwards Hot-Kold gas fired winter air conditioning units" are illustrated in a very interesting way in a new 6-page folder, giving dimensioned drawings and specifications for home installation.

NATIONAL RADIATOR CORP., Johnstown, Pa.

1139—**National Boilers and Radiators**—"The National Line Meets Every Heating Need" is a vest pocket catalog of 24 pages giving illustrations and dimensions of ten National boilers and nine styles of National radiators.

UNITED STATES RADIATOR CORP., Detroit, Mich.

1140—**Capitol Boilers and Radiators**—"Now We Can Get Together on Heating" is an interesting broadside in colors telling how to improve properties through the National Housing Act, and featuring new designs in heating equipment.

WILLIAMSON HEATER Co., 337 W. 5th St., Cincinnati, Ohio

1141—**Warm Air Furnaces**—General

catalog of 100 pages containing descriptive matter and engineering data on furnaces and fittings.

BASTIAN-MORLEY Co., La Porte, Ind.

1142—**Gas Fired Boiler**—"Care Free Heating" is a circular giving complete details of "Basmor" Series 25 Gas Fired Boilers for small buildings, and Series 40 for larger buildings.

CONTRACTORS' EQUIPMENT

PYRENE MANUFACTURING Co., Newark, N.J.

1143—**Fire Protection on the Job**—"Firefax" gives important information regarding the Pyrene system of fire protection and fire fighting equipment for buildings during the course of construction.

WORTHINGTON PUMP AND MACHINERY CORP., Harrison, N.J.

1144—**Drilling Equipment**—"Meet the Rock Master" is a 4-page folder, illustrated, showing how contractors handle their drilling jobs in a cost-saving way.

GAST MANUFACTURING CORP., Bridgman, Mich.

1145—**Paint Spray Equipment**—Gast air painters are presented in a 24-page illustrated booklet; surface coverage table, and photos of unique finishes included.

M & M WIRE CLAMP Co., Minneapolis, Minn.

1146—**Wire Ties**—Ten pages of up-to-date information for concrete form builders is offered, featuring "The Tie That Binds and Spaces."

METAL FORMS CORP., 3334 N. Booth St., Milwaukee, Wis.

1147—**Concrete Forms**—"Metaforms for Building Construction" is a booklet describing steel forms for building concrete walls and buildings, and for all types of monolithic concrete work.

American Builder,
105 W. Adams St.,
Chicago, Ill.

(January, 1935)

Please have the following Catalogs listed in this issue sent me—

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NOTICE TO ADVERTISERS

Forms for the February Number of the American Builder and Building Age will close promptly on January 15. New copy, changes, order for omissions of advertisements must reach our business office 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 15th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN BUILDER AND BUILDING AGE.